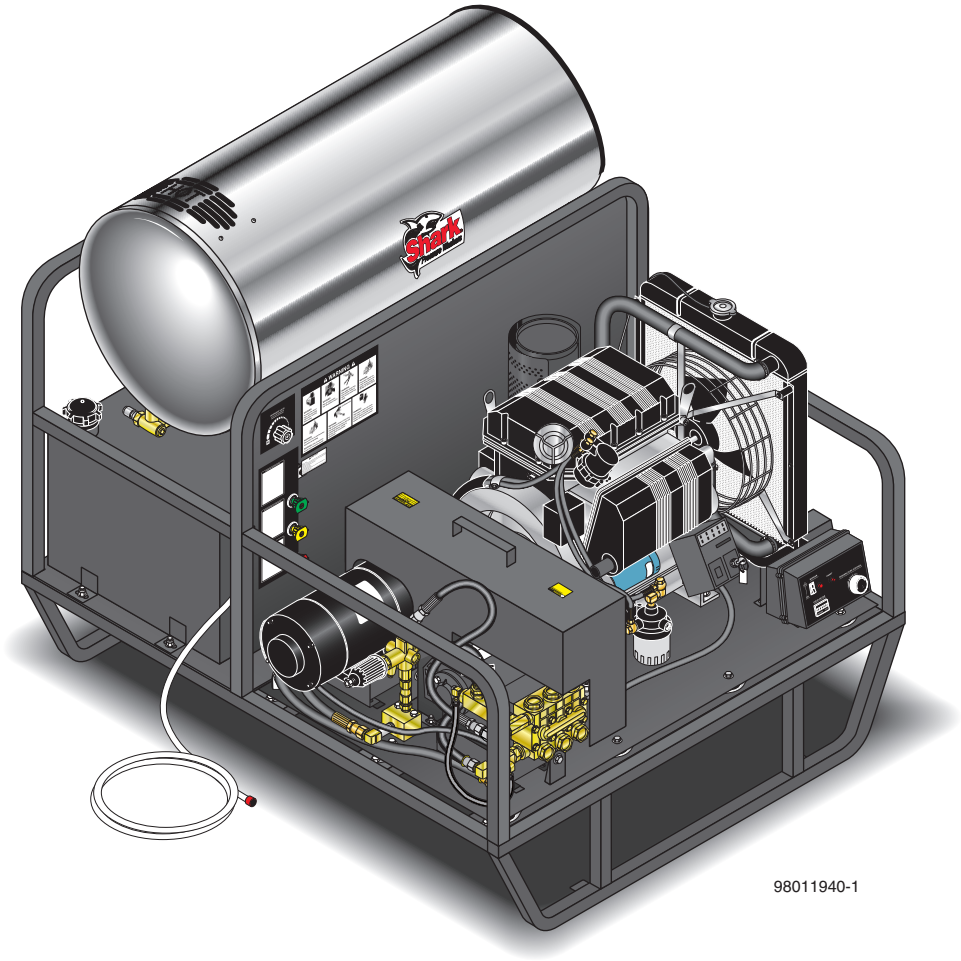
Shark Pressure Washers

# SSD

# OPERATOR'S MANUAL



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| MODEL # | ORDER # |
|---|---|
| SSD-603567E | 1.110-586.0 |
| SSD-603567E/G | 1.110-587.0 |

To locate your local Shark Commercial Pressure Washer Dealer nearest you,
**visit www.sharkpw.com**

9.801-194.0

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Model Number _____

Serial Number _____

Date of Purchase _____

The model and serial numbers will be found on a decal attached to the pressure washer. You should record both serial number and date of purchase and keep in a safe place for future reference.

# INTRODUCTION & IMPORTANT SAFETY INFORMATION

Thank you for purchasing a Shark Pressure Washer. We reserve the right to make changes at any time without incurring any obligation.

## Owner/User Responsibility:

The owner and/or user must have an understanding of the manufacturer's operating instructions and warnings before using this pressure washer. Warning information should be emphasized and understood. If the operator is not fluent in English, the manufacturer's instructions and warnings shall be read to and discussed with the operator in the operator's native language by the purchaser/owner, making sure that the operator comprehends its contents.

Owner and/or user must study and maintain for future reference the manufacturers' instructions.

The operator must know how to stop the machine quickly and understand the operation of all controls. Never permit anyone to operate the engine without proper instructions.

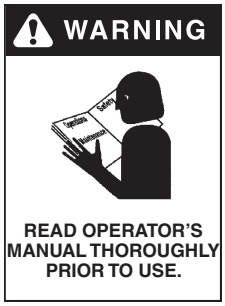
## SAVE THESE INSTRUCTIONS

**This manual should be considered a permanent part of the machine and should remain with it if machine is resold.**

**When ordering parts, please specify model and serial number. Use only identical replacement parts.**

**This machine is to be used only by trained operators.**

# IMPORTANT SAFETY INFORMATION




***WARNING: To reduce the risk of injury, read operating instructions carefully before using.***

1. Read the owner's manual thoroughly. Failure to follow instructions could cause malfunction of the machine and result in death, serious bodily injury and/or property damage.
2. Know how to stop the machine and bleed pressure quickly. Be thoroughly familiar with the controls.
3. Stay alert — watch what you are doing.

***WARNING: Keep wand, hose, and water spray away from electric wiring or fatal electric shock may result.***

4. All installations must comply with local codes. Contact your electrician, plumber, utility company or the selling distributor for specific details.

***WARNING: This machine exceeds 85 db appropriate ear protection must be worn.***

***WARNING: High pressure spray can cause paint chips or other particles to become airborne and fly at high speeds. To avoid personal injury, eye, hand and foot safety devices must be worn.***

5. Eye, hand, and foot protection must be worn when using this equipment.
6. Keep operating area clear of all persons.

***WARNING: Flammable liquids can create fumes which can ignite, causing property damage or severe injury.***

***WARNING: Risk of explosion — Operate only where open flame or torch is permitted.***

***WARNING: Risk of fire — Do not add fuel when the product is operating or still hot.***

***WARNING: Do not use gasoline crankcase draining or oil containing gasoline, solvents or alcohol. Doing so will result in fire and/or explosion.***

***WARNING: Risk of fire — Do not Spray flammable liquids.***

7. Allow engine to cool for 1-2 minutes before refueling. If any fuel is spilled, make sure the area is dry before testing the spark plug or starting the engine. (Fire and/or explosion may occur if this is not done.)

   Gasoline engines on mobile or portable equipment shall be refueled:

   a. outdoors;
   b. with the engine on the equipment stopped;
   c. with no source of ignition within 10 feet of the dispensing point; and
   d. with an allowance made for expansion of the fuel should the equipment be exposed to a higher ambient temperature.

# IMPORTANT SAFETY INFORMATION

In an overfilling situation, additional precautions are necessary to ensure that the situation is handled in a safe manner.

***WARNING: Risk of injury. Disconnect battery ground terminal before servicing.***

8. When in use , do not place machine near flammable objects as the engine is hot.
9. Oil burning appliances shall be installed only in locations where combustible dusts and flammable gases or vapors are not present. Do not store or use gasoline near this machine.
10. Use No. 1 or No. 2 heating oil (ASTM D306) only. **NEVER** use gasoline in your fuel oil tank. Gasoline is more combustible than fuel oil and could result in a serious explosion. **NEVER** use crankcase or waste oil in your burner. Fuel unit malfunction could result from contamination.
11. Do not confuse gasoline and fuel oil tanks. Keep proper fuel in proper tank.

***WARNING: Risk of injury. Hot surfaces can cause burns. Use only designated gripping areas of spray gun and wand. Do not place hands or feet on non-insulated areas of the pressure washer.***

12. Transport/repair with fuel tank EMPTY or with fuel shut-off valve OFF.

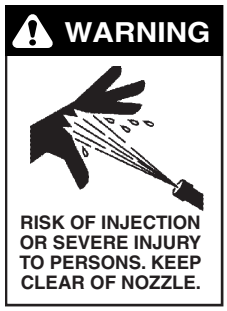
***CAUTION: Hot discharge fluid. Do not touch or direct discharge stream at persons.***

***WARNING: This machine produces hot water and must have insulated components attached to protect the operator.***

13. To reduce the risk of injury, close supervision is necessary when a machine is used near children. Do not allow children to operate the pressure washer. **This machine must be attended during operation.**

***WARNING: Grip cleaning wand securely with both hands before starting. Failure to do this could result in injury from a whipping wand.***

14. Never make adjustments on machine while in operation.
15. Be certain all quick coupler fittings are secured before using pressure washer.




***WARNING: High pressure developed by these machines will cause personal injury or equipment damage. Keep clear of nozzle. Use caution when operating. Do not direct discharge stream at people, or severe injury or death will result.***

***WARNING: Protect machine from freezing.***

16. To keep machine in best operating conditions, it is important you protect machine from freezing. Failure to protect machine from freezing could cause malfunction of the machine and result in death, serious bodily injury, and/or property damage. Follow storage instructions specified in this manual.
17. Inlet water must be clean fresh water and no hotter then 90°F.

***WARNING: Risk of asphyxiation. Use this product only in a well ventilated area.***

18. Avoid installing machines in small areas or near exhaust fans. Adequate oxygen is needed for combustion or dangerous carbon monoxide will result.
19. Manufacturer will not be liable for any changes made to our standard machines or any components not purchased from us.
20. The best insurance against an accident is precaution and knowledge of the machine.

***WARNING: Be extremely careful when using a ladder, scaffolding or any other relatively unstable location. The cleaning area should have adequate slopes and drainage to reduce the possibility of a fall due to slippery surfaces.***

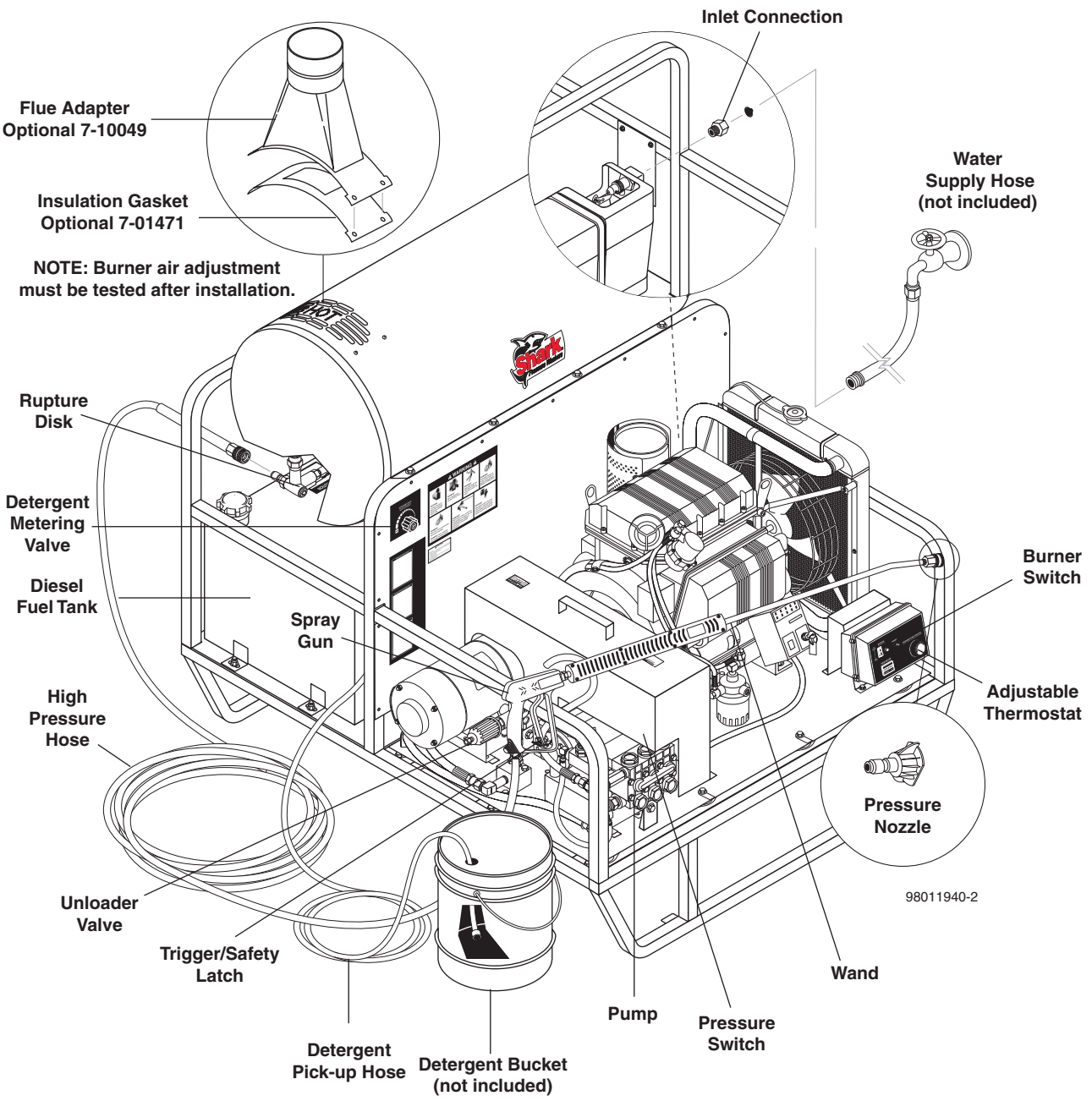
21. Do not allow acids, caustic or abrasive fluids to pass through the pump.
22. Never run pump dry or leave spray gun closed longer than 1-2 minutes.

# IMPORTANT SAFETY INFORMATION

23. Machines with shut-off spray gun should not be operated with the spray gun in the off position for extensive periods of time as this may cause damage to the pump.
24. Protect discharge hose from vehicle traffic and sharp objects. Inspect condition of high pressure hose before using or bodily injury may result.
25. Before disconnecting discharge hose from water outlet, turn burner off and open spray gun to allow water to cool below 100° before stopping the machine. Then open the spray gun to relieve pressure. Failure to properly cool down or maintain the heating coil may result in a steam explosion.
26. Do not overreach or stand on unstable support. Keep good footing and balance at all times.
27. Do not operate this machine when fatigued or under the influence of alcohol, prescription medications, or drugs.
28. In oil burning models, use only kerosene, No. 1 home heating fuel, or diesel. If diesel is used, add a soot remover to every tankful.

***Follow the maintenance instructions specified in the manual.***

# COMPONENT IDENTIFICATION




**Pump** — Develops high pressure by pumping water volume through nozzle.

**Spray Gun** — Controls the application of water and detergent onto cleaning surface with trigger device. Includes safety latch.

**Detergent Metering Valve** — Controls detergent mixture.

**Wand** — Must be connected to the spray gun.

**Rupture Disk** — Will burst when extreme pressure limits are reached.

**Pressure Switch** — Activates fuel solenoid to turn off burner when trigger on spray gun is released.

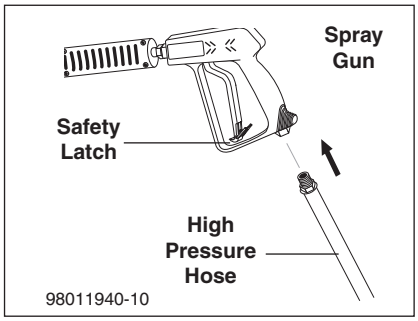
**Unloader Valve** — Safety control which releases pressure when spray gun trigger is released.

**High Pressure Hose** — Connect one end to water pump discharge nipple and the other end to spray gun.

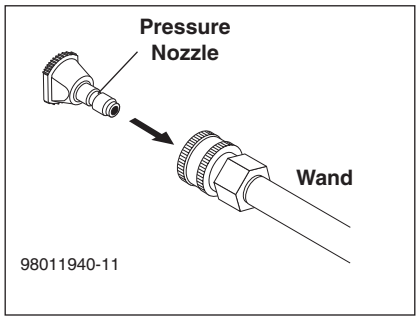
**Pressure Nozzle** — Inserted into wand quick coupler to develop pressure

**Adjustable Thermostat** — Prevents water temperature from exceeding high temperatures. Is not used to maintain constant temperature setting.

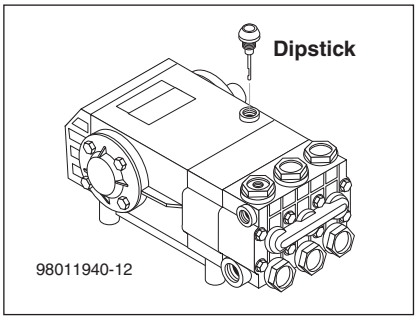
# ASSEMBLY INSTRUCTIONS



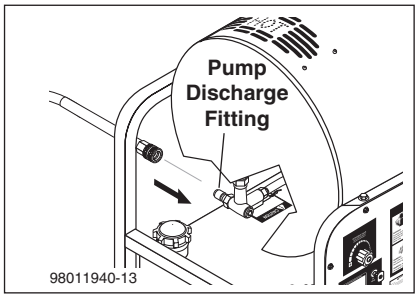

**STEP 1:** Attach the high pressure hose to the spray gun using teflon tape on hose threads.



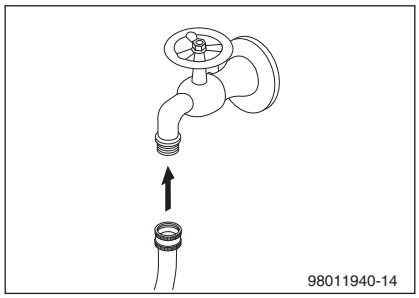

**STEP 2:** Pull the spring-loaded collar of the wand coupler back to insert your choice of pressure nozzle.



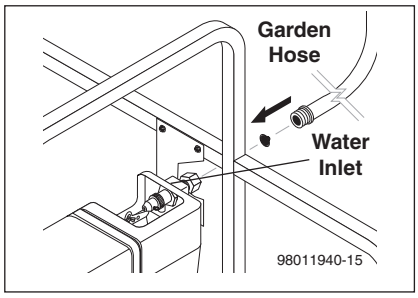

**STEP 3:** Remove shipping cap and install oil dipstick. Check pump oil level by using dipstick or observe oil level in oil window (if equipped). Use 30 wt. non detergent oil.




**STEP 4:** Connect the high pressure hose to the pump discharge fitting. Push coupler collar forward until secure.

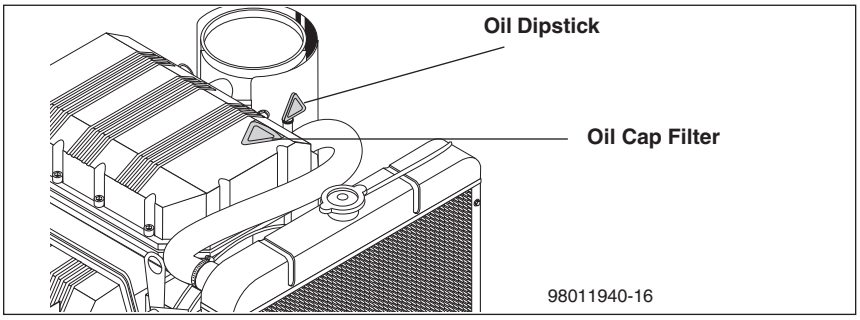



**STEP 5:** Connect garden hose to cold water source and turn water on completely. ***Never use hot water.***

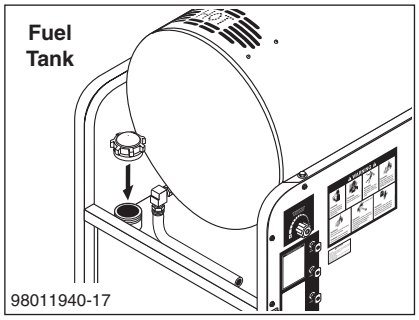



**STEP 6:** Connect the garden hose to pump water inlet. Inspect inlets. ***CAUTION: Do not run the pump without water or pump damage will result.***

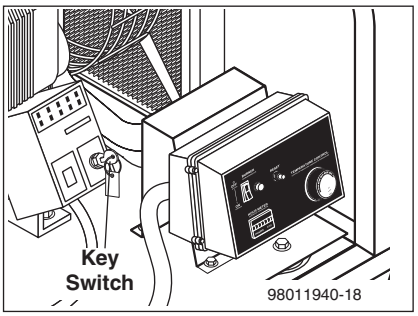
# OPERATING INSTRUCTIONS



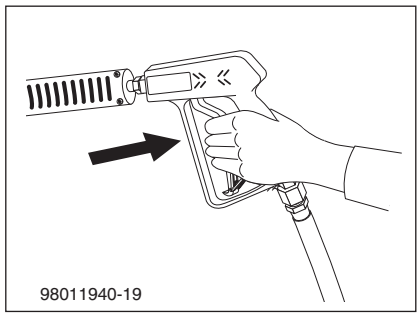

**STEP 1:** Read operator's manual before operating machine. Check engine oil level. Oil level should be level with the bottom of the oil filler neck. (Refer to the engine's operating manual included with machine.) We recommend that the oil be changed after the first 50 hours of use, then once every 250 hours. **NOTE:** Improper oil levels will cause low oil sensor to shut off engine. ***IMPORTANT! Do not run engine with high or low oil levels as this will cause engine damage.***



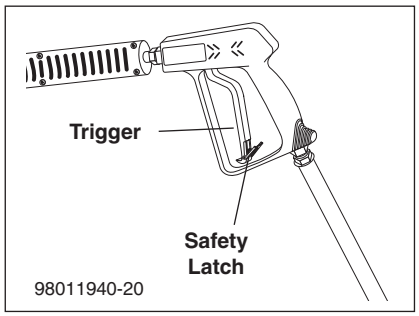

**STEP 2:** Fill engine fuel tank with No. 2 diesel fuel. Check engine and pump oil levels. Check engine radiator fluid level. Install battery and connect red cable to the + terminal and black to the - terminal.




**STEP 3:** Read engine manual. The keyed ignition is located on the engine control panel. Turn key to first position. The glow plug light will illuminate. When the light goes out, turn key to start (second) position. Do not hold key in start position longer than five (5) seconds or starter motor will be damaged.

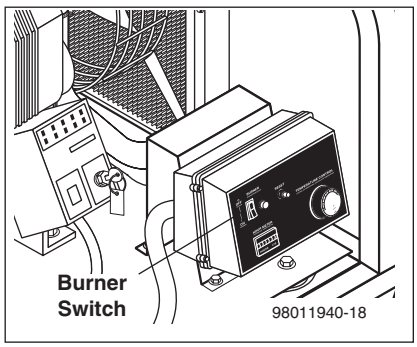



**STEP 4:** Before installing pressure nozzle, trigger spray gun to eliminate trapped pressure. Then run machine allowing water to flush through the system until clear.



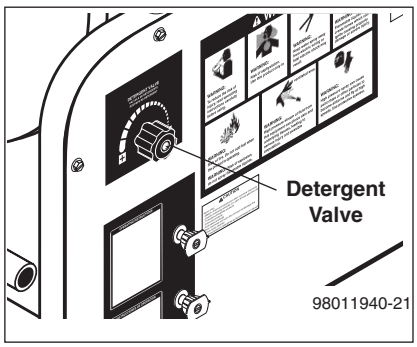

**STEP 5:** With spray gun and wand pointed away from you or anybody else, insert pressure nozzle into quick coupler on end of wand. Press trigger on spray gun to obtain pressurized cold water spray.

***⚠ WARNING! Never replace nozzles without engaging the safety latch on the spray gun trigger.***

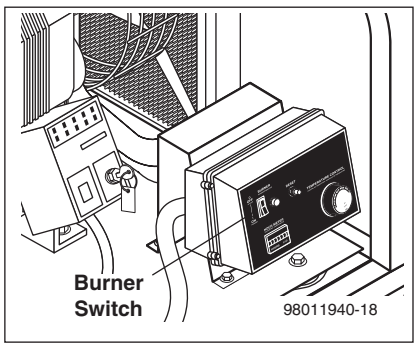



**STEP 6:** For hot water, turn the burner switch to ON when a steady stream of water flows out of the spray gun. Burner will light automatically.

**NOTE:** Do not start machine with burner switch on.




**STEP 7:** To apply detergent, place detergent pick-up tube into a container of detergent and turn the detergent valve counterclockwise.



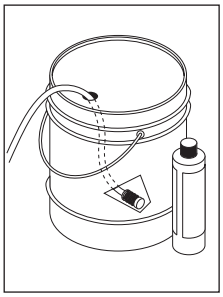

**STEP 8:** To stop, reverse steps and set all controls to their original settings.

Turn burner switch OFF and open trigger on spray gun, allowing water to cool.

# DETERGENTS & GENERAL CLEANING TECHNIQUES

**⚠ WARNING**

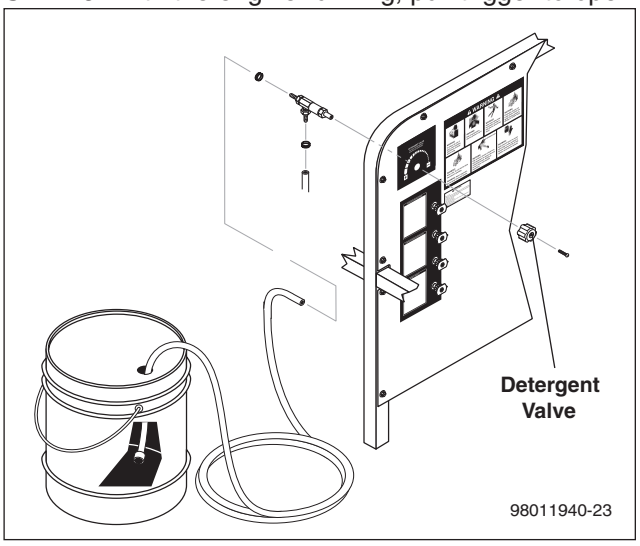
***WARNING: Some detergents may be harmful if inhaled or ingested, causing severe nausea, fainting or poisoning. The harmful elements may cause property damage or severe injury.***

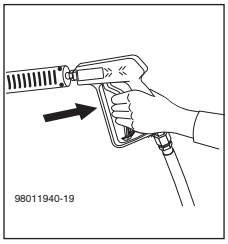


**STEP 1:** Use detergent designed specifically for pressure washers. Household detergents could damage the pump. Prepare detergent solution as required by the manufacturer. Fill a container with pressure washer detergent. Place the filter end of detergent suction tube into the detergent container.

**STEP 2:** Open detergent valve to desired mixture ratio.

**STEP 3:** With the engine running, pull trigger to operate machine. Liquid detergent is drawn into the machine and mixed with water. Apply detergent to work area. Do not allow detergent to dry on surface.




***IMPORTANT: You must flush the detergent line after each use by placing the suction tube into a bucket of clean water, then run the pressure washer for 1-2 minutes.***

## THERMAL PUMP PROTECTION

If you run the engine on your pressure washer for 3-5 minutes without pressing the trigger on the spray gun, circulating water in the pump can reach high temperatures. When the water reaches this temperature, the pump protector engages and cools the pump by discharging the warm water onto the ground. This thermal device prevents internal damage to the pump.

## CLEANING TIPS

Pre-rinse cleaning surface with fresh water. Place detergent suction tube directly into cleaning solution and apply to surface (for best results, limit your work area to sections approximately 6 feet square and always apply detergent from bottom to top). Allow detergent to remain on surface 1-3 minutes. Do not allow detergent to dry on surface. If surface appears to be drying, simply wet down surface with fresh water. If needed, use brush to remove stubborn dirt. Rinse from top to bottom in an even sweeping motion keeping the spray nozzle approximately 1 foot from cleaning surface. Use overlapping strokes as you clean and rinse any surface. For best surface cleaning action spray at a slight angle.

### Recommendations:

- Before cleaning any surface, an inconspicuous area should be cleaned to test spray pattern and distance for maximum cleaning results.
- If painted surfaces are peeling or chipping, use extreme caution as pressure washer may remove the loose paint from the surface.
- Keep the spray nozzle a safe distance from the surface you plan to clean. High pressure wash a small area, then check the surface for damage. If no damage is found, continue to pressure washing.

***⚠ CAUTION - Never use:***

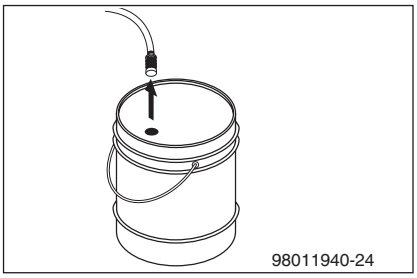
- Bleach, chlorine products and other corrosive chemicals
- Liquids containing solvents (i.e., paint thinner, gasoline, oils
- Tri-sodium phosphate products
- Ammonia products
- Acid-based products

These chemicals will harm the machine and will damage the surface being cleaned.

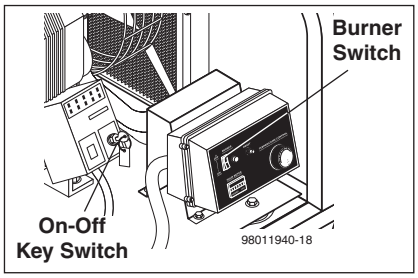
## RINSING

It will take a few seconds for the detergent to clear. Apply safety latch to spray gun. Open detergent valve. Select and install the desired high pressure nozzle. **NOTE:** You can also stop detergent from flowing by simply removing detergent siphon tube from bottle.

# SHUTTING DOWN AND CLEAN-UP

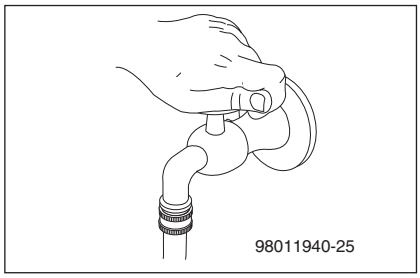



**STEP 1:** Remove detergent suction tube from container and insert into one gallon of fresh water. Open detergent mixing valve. Pull trigger on spray gun and siphon water for one minute.

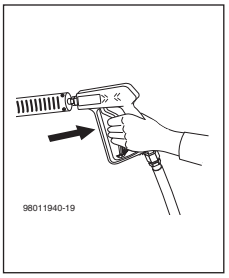



**STEP 2:** Turn burner switch off and continue spraying, allowing water to cool below 100°F.

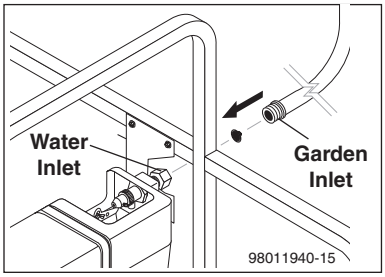
To stop engine, turn key to off position.



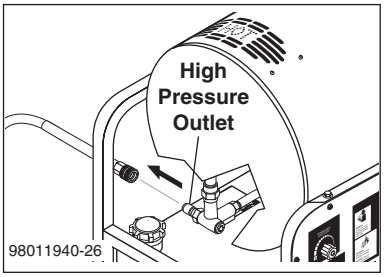

**STEP 3:** Turn off water supply.




**STEP 4:** Press trigger to release water pressure.




**STEP 5:** Disconnect the garden hose from the water inlet on the machine.




**STEP 6:** Disconnect the high pressure hose from high pressure outlet. Protect from freezing.

**STEP 7:** Engage the spray gun safety lock.

# STORAGE

Measures should be taken to protect your FOCS series engine if the engine is not operated for a period of 30 days or more. Proper storage will protect the engine from corrosion and prevent costly repairs due to storage induced problems.

## Storage - 1 to 6 months

1. Start and idle the engine at a no-load condition for 15 minutes.
2. Stop the engine, allow the engine to cool enough to safely drain the oil as shown Re-install the oil drain plug, then fill the crankcase with MIL-L-644-P9 protectant oil. Fill the fuel tank with a high grade fuel preservative (add mix) such as STA-BIL per the manufacturer recommendations.
3. Start and operate the engine at 3/4 speed for 5-10 minutes.
4. Stop the engine, allow to cool enough to safely drain the engine oil as shown. Re-install the oil drain plug.
5. Refill the engine with standard recommended lubricating oil.
6. Drain the fuel tank. Remove the fuel filter. Install a new fuel filter.
7. Carefully clean all debris from the radiator fins.
8. Remove the intake manifold. Rotate the engine until the intake valve opens at each cylinder. Using suitable means, pour approximately 1 tsp. of engine oil into each cylinder. Rotate the engine several revolutions. Spray the inside of the intake manifold with SAE 10 W oil. Replace the intake manifold using a new gasket.
9. Spray the inside of the exhaust manifold with SAE 10W oil.
10. Cover all openings with tape and apply grease to any and all unpainted surfaces.
11. Loosen the fan belt before wrapping the engine in plastic film and storing in a dry place away from high voltage sources and off the ground.

## Storage - In excess of 6 months

Perform the storage preparation procedures approximately as detailed, except with the following changes.

1. Replace the oil in step 2 above with MIL-L-21260, grade 2, SAE 30W rustproof oil.
2. Delete steps 5 and 11 above.
3. Coat any and all unpainted surfaces with MIL-C 16173D, grade 3 anti-rust grease.
4. Replace anti-freeze every 2 years.

# MAINTENANCE

## PREVENTATIVE MAINTENANCE

1. Check to see that water pump is properly lubricated.
2. Follow winterizing instructions to prevent freeze damage to pump and coils.
3. Always neutralize and flush detergent from system after use.
4. If water is known to have high mineral content, use a water softener in your water system, or de-scale as needed.
5. Do not allow acidic, caustic or abrasive fluids to be pumped through system.
6. Always use high grade quality cleaning products.
7. Never run pump dry for extended periods of time.
8. Use clean No. 2 diesel fuel. Clean or replace fuel filter every 250 hours of operation. Avoid water contaminated fuel as it will damage the fuel pump.
9. If machine is operated with smoky or eye burning exhaust, coils will soot up. Adjust air bands and fuel pressure for proper emission.
10. Never allow water to be sprayed on or near the engine or burner assembly or any electrical component.
11. Periodically delime coils as per instructions.
12. Check to see that engine is properly lubricated. Use SAE 10W40 grade oil.

It is advisable, periodically, to visually inspect the burner. Check air inlet to make sure it is not clogged or blocked. Wipe off any oil spills and keep equipment clean and dry.

The flow of combustion and ventilating air to the burner must not be blocked or obstructed in any manner.

The area around the washer should be kept clean and free of combustible materials, gasoline and other flammable vapors and liquids.

## MAINTENANCE AND SERVICE

### Unloader Valves:

Unloader valves are preset and tested at the factory before shipping. Occasional adjustment of the unloader may be necessary to maintain correct pressure.

### Adjusting Unloader Valves:

Tampering with the factory setting may cause personal injury and/or property damage and will void the manufacturer's warranty.

### Winterizing Procedure:

Damage due to freezing is not covered by warranty. Adhere to the following cold weather procedures whenever the washer must be stored or operated outdoors under freezing conditions.

During winter months, when temperatures drop below 32°F, protecting your machine against freezing is necessary. Store the machine in a heated room. If this is not possible then mix a 50/50 solution of anti-freeze and water in the float tank. Turn the engine on to siphon the anti-freeze mixture through the machine. If compressed air is available, an air fitting can be screwed into the float tank by removing the float tank strainer and fitting. Then inject the compressed air. Water will be blown out of the machine when the trigger on the spray gun is opened.

### High Limit Hot Water Thermostat:

For safety, each machine is equipped with a temperature sensitive high limit control switch. In the event that the water should exceed its operating temperature, the high limit control will turn the burner off until the water cools, then it will automatically reset itself. The thermostat sensor is located on the discharge side of the heating coil. The thermostat control dial is located on the control panel.

### Pumps:

Use only SAE 10/40 weight non-detergent oil. Change oil after first 50 hours of use. Thereafter, change oil every three months or at 500 hour intervals. Oil level should be checked through use of dipstick found on top of pump, or the red dot visible through the oil gauge window. Oil should be maintained at that level.

# MAINTENANCE AND SERVICE

## Deliming Coils:

Periodic flushing of coils or optional float tank is recommended.

**Step 1** Fill a container with 4 gallons of water, then . add 1 lb. of deliming powder. Mix thoroughly. Pour mixture into float tank.

**Step 2** Remove wand assembly from spray gun and put spray gun into float tank. Secure the trigger on the spray gun into the open position.

**Step 3** Turn engine on, allowing solution to be pumped through coils back into the float tank. The solution should be allowed to circulate 2- 4 hours or until the color changes.

**Step 4** After circulating solution, flush the entire system with fresh water. Clean out float tank and then reinstall wand assembly to spray gun.

## Removal of Soot from Heating Coil:

In the heating process, fuel residue in the form of soot deposits may develop between the heating coil pipe, and block air flow which will affect burner combustion. When soot has been detected on visual observation, the soot on the coil must be washed off after following the coil removal steps (See Coil Removal section).

## Fuel:

Use clean fuel oil that is not contaminated with water and debris. Replace fuel filter and drain tank every 100 hours of operation.

Use No.1 or No 2 Heating Oil (ASTM D306) only. NEVER use gasoline in your burner fuel tank. Gasoline is more combustible than fuel oil and could result in a serious explosion. NEVER use crankcase or waste oil in your burner. Fuel unit malfunction could result from contamination.

## Fuel Control System:

This machine utilizes a fuel solenoid valve located on the fuel pump to control the flow of fuel to the combustion chamber. The solenoid, which is normally closed, is activated by a flow switch when water flows through it. When the operator releases the trigger on the spray gun, the flow of water through the flow switch stops, turning off the electrical current to the fuel solenoid.

The solenoid then closes, shutting off the supply of fuel to the combustion chamber. Controlling the flow of fuel in this way gives an instantaneous burn-or-no-burn situation, thereby eliminating high and low water temperatures and the combustion smoke normally associated with machines incorporating a spray gun. Periodic inspection, to insure that the fuel solenoid valve functions properly, is recommended. This can be done by operating the machine and checking to see that the burner is not firing when the spray gun is in the OFF position.

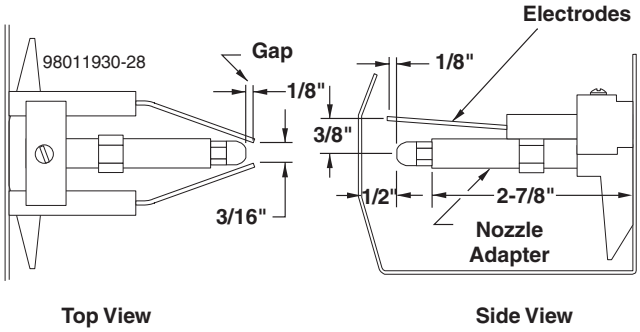
## Fuel Pressure Adjustment:

To control water temperature, adjust fuel pressure by turning the regulating pressure adjusting screw clockwise to increase, counterclockwise to decrease. **NOTE**: When changing fuel pump, a bypass plug must be installed in return port or fuel pump will not prime.

## Burner Nozzle:

Keep the tip free of surface deposits by wiping it with a clean, solvent saturated cloth, being careful not to plug or enlarge the nozzle. For maximum efficiency, replace the nozzle each season.

## Electrode Setting:

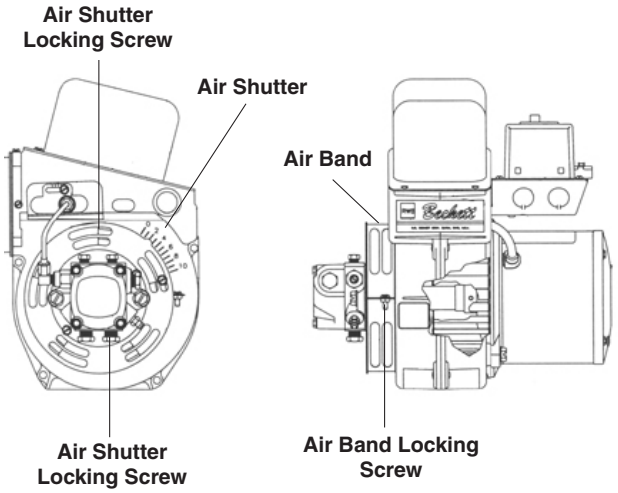



**Periodically Check Wiring Connections. If Necessary To Adjust Electrodes, Use Diagram.**

## Beckett Burner Air Adjustment:

The oil burner on this machine is preset for operation at altitudes below 1000 feet. If operated at higher altitudes, it may be necessary to adjust the air band setting. Adjust air band for a #1 or #2 smoke spot on the Bacharach scale. If a smoky or eye-burning exhaust is being emitted from the stack, two things should be checked. First, check the fuel to be certain that kerosene or No.1 home heating fuel is being used. Next, check the air adjustment on the burner. An oily, smoky fire indicates a lack of air and the air band should be moved to allow the air to flow through the burner. Sharp eye-burning fumes indicate too much air flowing through the combustion chamber. The air band should be readjusted to allow less air to flow through the burner.

# MAINTENANCE AND SERVICE




**To adjust**, start the machine and turn burner ON. Loosen two locking screws found in the air shutter openings (see illustration) and close air shutter until black smoke appears from burner exhaust vent. Note air band position. Next, slowly open the air shutter until white smoke just starts to appear. Turn air shutter halfway back to the black smoke position previously noted. Tighten locking screws.

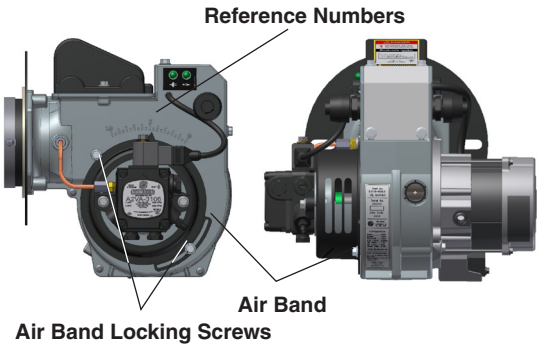
If the desired position cannot be obtained using only the air shutter, lock the air shutter in as close a position as can be obtained, then repeat the above procedure on the air band setting.

## Shark Clear Flame Oil Burner

**Burner Air Adjustment**: The oil burner on this machine is preset for operation at altitudes below 1000 feet. If operated at higher altitudes, it may be necessary to adjust the air band for a #1 or #2 smoke spot on the Bacharach scale.

To adjust, start machine and turn burner ON. Loosen two locking screws found on the air band and close air band until black smoke appears from burner exhaust vent. Note air band position. Next, slowly open the air band until white smoke just starts to appear. Turn air band halfway back to the previously noted position. Tighten locking screws.

## Clear Flame Burner Air Adjustment




**CAUTION:** ***If white smoke appears from burner exhaust vent during start-up or operation, discontinue use and readjust air bands.***

**NOTE:** If a flue is installed, have a professional serviceman adjust your burner for a #1 or #2 smoke spot on the Bacharach scale.

# TROUBLESHOOTING

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| **LOW OPERATING PRESSURE** | Faulty pressure gauge | Install new gauge. |
| | Insufficient water supply | Use larger supply hose; clean filter at water inlet. |
| | Old, worn or incorrect spray nozzle | Match nozzle number to machine and/or replace with new nozzle. |
| | Belt slippage | Tighten or replace; use correct belt. |
| | Plumbing or hose leak | Check plumbing system for leaks. Retape leaks with teflon tape. |
| | Faulty or misadjusted unloader valve | Adjust unloader for proper pressure. Install repair kit when needed. |
| | Worn packing in pump | Install new packing kit. |
| | Fouled or dirty inlet or discharge valves in pump | Clean inlet and discharge valves. |
| | Worn inlet or discharge valves | Replace with valve kit. |
| | Obstruction in spray nozzle | Remove obstruction. |
| | Leaking pressure control valve | Rebuild or replace as needed. |
| | Slow engine RPM | Set engine speed at proper specifications. |
| | Pump sucking air | Check water supply and possibility of air seepage. |
| | Valves sticking | Check and clean or replace if necessary. |
| | Unloader valve seat faulty | Check and replace if necessary. |
| **BURNER WILL NOT LIGHT** | Little or no fuel | Fill tank with fuel. |
| | Improper fuel or water in fuel | Drain fuel tank and fill with proper fuel. |
| | Clogged fuel line | Clean or replace. |
| | Plugged fuel filter | Replace as needed. |
| | Misadjusted burner air bands | Readjust air bands for clean burn. |
| | Little or no fuel pressure from fuel pump | Increase fuel pressure to specification and/or replace fuel pump. Test with pressure gauge. |
| | Faulty burner transformer | Test transformer for proper arc between contacts. Replace as needed. |
| **(continued on next page)** | Disconnected or short in electrical wiring | All wire contacts should be clean and tight. No breaks in wire. |

# TROUBLESHOOTING

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| **BURNER WILL NOT LIGHT** (continued from previous page) | Flex coupling slipping on fuel pump shaft or burner motor shaft | Replace if needed. |
| | On-Off switch defective | Check for electrical current reaching burner assembly with burner switch on. |
| | Heavy sooting on coil and burner can cause interruption of air flow and shorting of electrodes | Clean as required. |
| | Improper electrode setting | Check and reset according to diagram in Operator's Manual. |
| | Fuel not reaching combustion chamber | Check fuel pump for proper flow. Check solenoid flow switch on machines with spray gun control, for proper on-off fuel flow control. |
| | Clogged burner nozzle | Clean as required. |
| | Thermostat faulty or slow engine speed | Increase engine RPM to increase voltage. |
| | Flow switch malfunction | Remove, test for continuity and replace as needed. |
| | Flow solenoid malfunction | Replace if needed. |
| **FLUCTUATING PRESSURE** | Valves worn | Check and replace if necessary. |
| | Blockage in valve | Check and replace if necessary. |
| | Pump sucking air | Check water supply and air seepage at joints in suction line. |
| | Worn piston packing | Check and replace if necessary. |
| | Gasoline engine altitude | The gasoline engine is preset for operation at altitudes below 1000 feet above sea level. If operated at higher altitudes, it may be necessary to install a high altitude main jet in the carburetor. Contact your local authorized engine sales and service center for details. |
| **MACHINE SMOKES** | Improper fuel or water in fuel | Drain tank and replace contaminated fuel. |
| | Improper air adjustment | Readjust air bands on burner assembly. |
| | Low fuel pressure | Adjust fuel pump pressure to specifications. |
| | Plugged or dirty burner nozzle | Replace nozzle. |
| | Faulty burner nozzle spray pattern | Replace nozzle. |
| | Heavy accumulation of soot on coils and burner assembly | Remove coils and burner assembly, clean thoroughly. |
| | Misaligned electrode setting | Realign electrodes to specifications. |
| | Obstruction in smoke stack | Check for insulation blockage or other foreign objects. |
| | Low engine RPM | Increase RPM. |

# TROUBLESHOOTING

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| **LOW WATER TEMPERATURE** | Improper fuel or water in fuel | Replace with clean and proper fuel. |
| | Low fuel pressure | Increase fuel pressure. |
| | Weak fuel pump | Check fuel pump pressure. Replace pump if needed. |
| | Fuel filter partially clogged | Replace as needed. |
| | Soot build-up on coils not allowing heat transfer | Clean coils. |
| | Improper burner nozzle | Call Dealer. |
| **WATER TEMPERATURE TOO HOT** | Incoming water to machine warm or hot | Lower incoming water temperature. |
| | Fuel pump pressure too high | See specifications for proper fuel pressure. |
| | Fuel pump defective | Replace fuel pump. |
| | Detergent line sucking air | Tighten all clamps. Check detergent lines for holes. |
| | Defective temperature switch | Replace. |
| | Incorrect fuel nozzle size | Call Dealer. |
| | Insufficient water supplied | Check water G.P.M. to machine. |
| | Restricted water flow | Check nozzle for obstruction, proper size. |
| **PUMP NOISY** | Air in suction line | Check water supply and connections on suction line. |
| | Broken or weak inlet or discharge valve springs | Check and replace if necessary. |
| | Excessive matter in valves | Check and clean if necessary. |
| | Worn bearings | Check and replace if necessary. |
| **PRESENCE OF WATER IN OIL** | Oil seal worn | Check and replace if necessary. |
| | High humidity in air | Check and change oil twice as often. |
| **WATER DRIPPING FROM UNDER PUMP** | Piston packing worn | Check and replace if necessary. |
| | O-Ring plunger retainer worn | Check and replace if necessary. |
| | Cracked piston | Check and replace if necessary. |
| | Pump protector | Lower water supply pressure. Do not run with spray gun closed longer than 2 minutes. |

# TROUBLESHOOTING

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| **OIL DRIPPING** | Oil seal worn | Check and replace if necessary. |
| **EXCESSIVE VIBRATION IN DELIVERY LINE** | Irregular functioning of the valves | Check and replace if necessary. |
| **DETERGENT NOT DRAWING** | Air leak | Tighten all clamps. Check detergent lines for holes. |
| | Restrictor in float tank is missing | Replace restrictor. Check for proper orifice in restrictor. |
| | Filter screen on detergent suction hose plugged | Clean or replace. |
| | Dried up detergent plugging metering valve | Disassemble and clean thoroughly. |
| | High viscosity of detergent | Dilute detergent to specifications. |
| | Hole in detergent line(s) | Repair hole. |
| | Low detergent level | Add detergent, if needed. |
| **PUMP RUNNING NORMALLY BUT PRESSURE LOW ON INSTALLATION** | Pump sucking air | Check water supply and possibility of air seepage. |
| | Valves sticking | Check and clean or replace if necessary. |
| | Nozzle incorrectly sized | Check and replace if necessary (See serial plate for proper size). |
| | Unloader valve seat faulty | Check and replace if necessary. |
| | Worn piston packing | Check and replace if necessary. |
| **BURNER MOTOR WILL NOT RUN** | Fuel pump seized | Replace fuel pump. |
| | Burner fan loose or misaligned | Position correctly, tighten set screw. |
| | Defective control switch | Replace switch. |
| | Loose wire | Check and replace or tighten wiring. |
| | Defective burner motor | Replace motor. |
| **RELIEF VALVE LEAKS WATER** | Relief valve defective | Replace or repair. |

# PREVENTATIVE MAINTENANCE

This pressure washer was produced with the best available materials and quality craftsmanship. However, you as the owner have certain responsibilities for the correct care of the equipment. Attention to regular preventative maintenance procedures will assist in preserving the performance of your equipment. Contact your dealer for maintenance. Regular preventative maintenance will add many hours to the life of your pressure washer. Perform maintenance more often under severe conditions.

**Check** pump oil level before first use of your new pressure washer. **Change** pump oil after first 50 hours and every 3 months or 500 hours thereafter. Use SAE 30 weight oil, non-detergent.

| Date Oil Changed Month/Day/Year | No. of Operating Hours Since Last Oil Change | Brand Name and Type of Oil (see above) |
|---|---|---|
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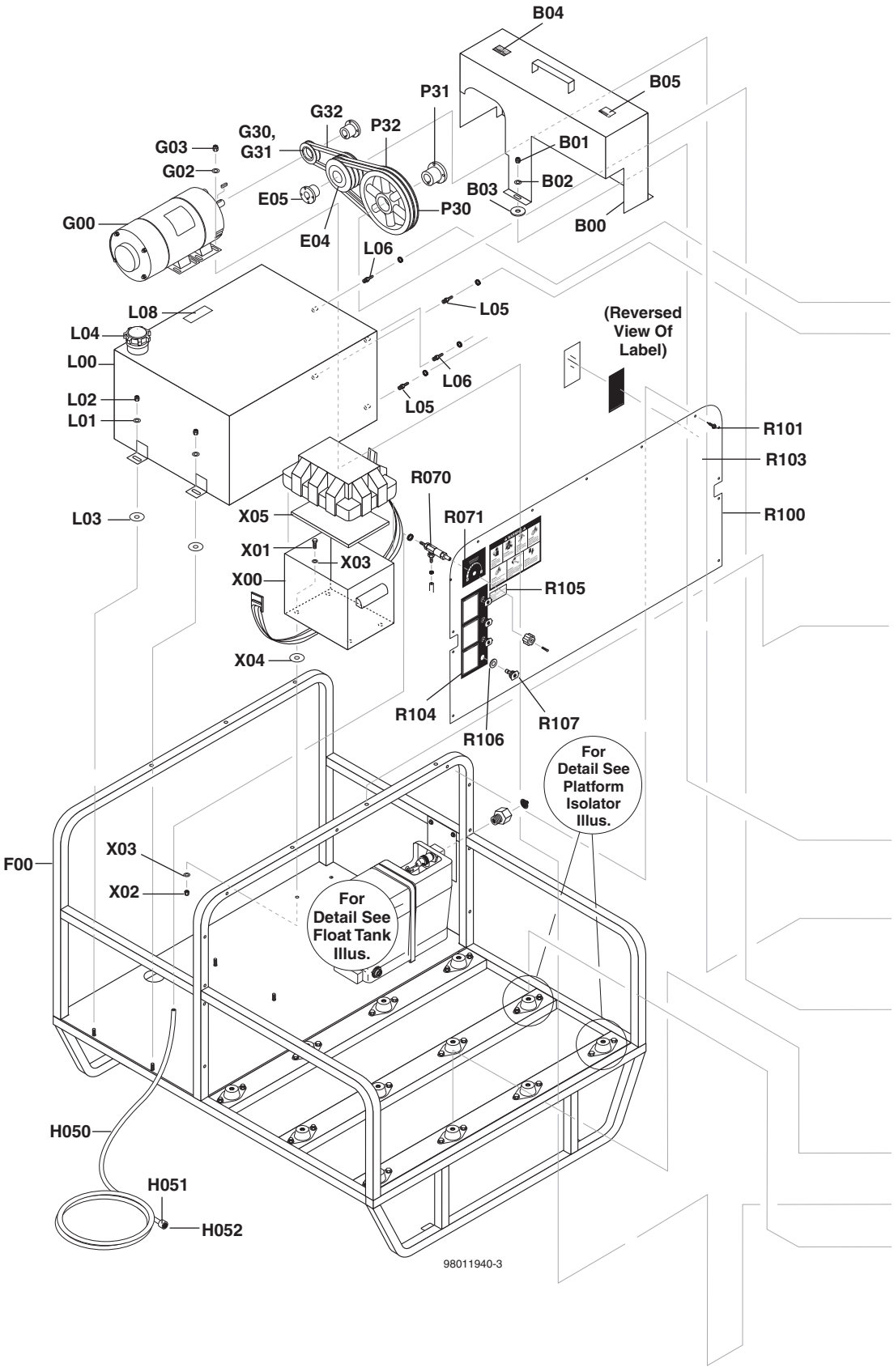
# MAINTENANCE

| Maintenance Operation | | Every 8 Hrs or Daily | 25 Hrs or Weekly | 50 Hrs or Monthly | 100 Hrs or Yearly | Yearly |
|---|---|---|---|---|---|---|
| Check Oil | Pump | | X | | | |
| | Engine | X | | | | |
| Change Oil | Pump | | | | | X |
| | Engine | | | X | | |
| Air Cleaner | | Check | | Clean | | |
| Spark Plug | | | | | X | |
| Check Valve Clearance | | | | | | X |
| Fuel Tank Filter | | | | | X | |
| Water Filter/Clean | | Check | | | | X |

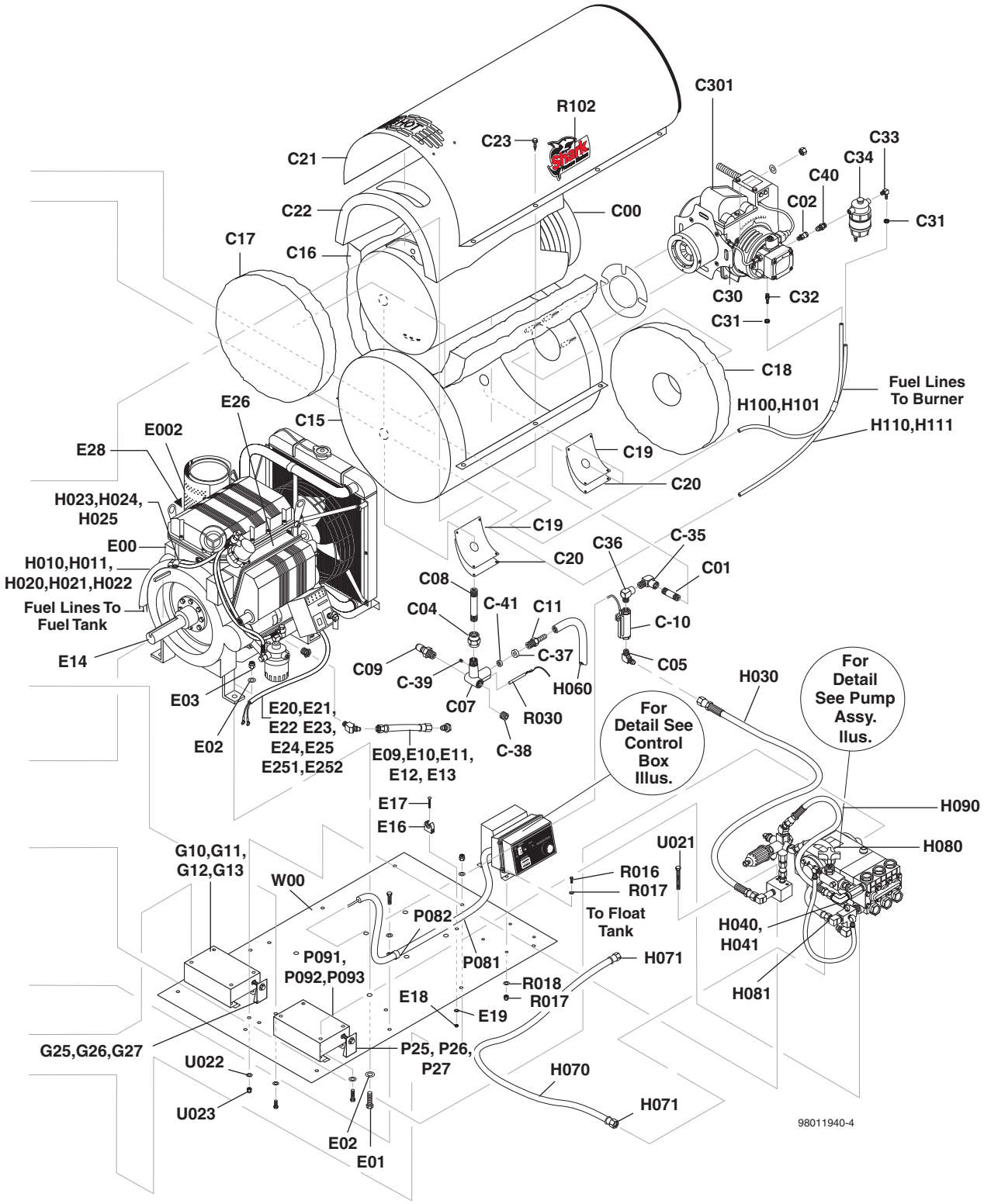
# EXPLODED VIEW




**LEGEND**

| | | | | | | |
|---|---|---|---|---|---|---|
| G = Generator | E = Engine | L = Fuel Tank | X = Battery Box | B = Beltguard | W= Power Platform | P = Pump |
| R = Controls | N = Final Assembly | F = Frame | T = Float Tank | H = Hose | U = Unloader | C = Coil |

# EXPLODED VIEW



# EXPLODED VIEW PARTS LIST

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| B00 | 9.803-023.0 | Belt Guard, Diesel, Black (587) | 1 |
| | 9.803-024.0 | Belt Guard, 12VDC Diesel (586) | 1 |
| B01 | 9.802-779.0 | Nut, 3/8" ESNA, NC | 3 |
| B02 | 9.802-807.0 | Washer, 3/8", SAE, Flat | 3 |
| B03 | 9.802-067.0 | Bumper Pad, Engine | 2 |
| B04 | 9.800-006.0 | Label, Hot/Caliente w/Arrows Warning | 1 |
| B05 | 9.800-007.0 | Label, Warning-Exposed Pulleys | 1 |
| C00 | 9.803-014.0 | Coil, Rodless | 1 |
| C01 | 9.802-013.0 | Nipple, 1/2" x 2-1/2", Galvanized SCH 80 | 1 |
| C02 | 8.752-113.0 | Adapter, 1/4" | 1 |
| C04 | 8.706-141.0 | Coupling, 1/2" | 1 |
| C05 | 9.802-039.0 | Elbow, 1/2" JIC x 3/8" MPT | 1 |
| C07 | 9.149-003.0 | Discharge, Manifold | 1 |
| C08 | 9.802-014.0 | Nipple, 1/2" x 3" Sch80 | 1 |
| C09 | 9.802-171.0 | Nipple, 3/8" x 3/8" NPT, Male | 1 |
| C10 | 8.933-006.0 | Switch, MV60 | 1 |
| C11 | 8.706-944.0 | Hose Barb, 3/8" Barb, ML Pipe | 1 |
| C15 | 9.803-006.0 | Weldment, Bottom Wrap | 1 |
| C16 | 9.802-896.0 | Insulation, Blanket, No Foil | 1 |
| C17 | 9.802-883.0 | Insulation, Front Head, No Hole | 1 |
| C18 | 9.802-894.0 | Insulation, Burner Head, w/Hole | 1 |
| C19 | 9.802-899.0 | Gasket, Burner Plate | 2 |
| C20 | 9.803-132.0 | Insulation Retainer | 2 |
| C201 | 9.802-797.0 | ▲ Screw, SS #10 HH Tek | 8 |
| C21 | 9.803-005.0 | Top Wrap, SS | 1 |
| C211 | 9.802-808.0 | ▲ Washer, 3/8", SAE, SS | 4 |
| C22 | 9.802-902.0 | Insulation/Blanket, Die-Cut 28 | 1 |
| C23 | 9.802-766.0 | Screw, 3/8" x 1" HX Wash Head | 8 |
| C30 | Burner Assembly, See Spec's Pages | | |
| C301 | 9.802-519.0 | Strain Relief, 1/2" Metal, Two Screw | 1 |
| C31 | 6.390-126.0 | Clamp, Hose, .46 -, .54 ST | 4 |
| C32 | 8.706-941.0 | Hose Barb, 1/4" Barb x 1/4" MPT Brass | 1 |
| C33 | 8.706-958.0 | Hose Barb, 1/4" Barb x 1/4" Pipe, 90° | 1 |
| C34 | 8.725-306.0 | Filter, Fuel/$H_2O$/Oil Separator | 1 |
| C35 | 9.802-024.0 | Elbow, Street 1/2"x 3/8" | 1 |
| C36 | 8.706-207.0 | Elbow, 3/8" Street | 1 |

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| C37 | 9.184-030.0 | Spacer, Rupture Disk | 1 |
| C38 | 8.706-248.0 | Plug, 3/8" | 1 |
| C39 | 9.196-012.0 | Screw, 10-24 x 1/4" | 1 |
| C40 | 8.752-114.0 | Nipple, 1/4" | 1 |
| C41 | 8.725-944.0 | Rupture Disk 8000 | 1 |
| R030 | 8.750-094.0 | Thermostat, Adjustable 302°F | 1 |
| E00 | 9.802-327.0 | Engine, Kohler Diesel, 27 HP | 1 |
| | 9.802-658.0 | ▲ Kit, Pressure Switch, Oil Dual Port | 1 |
| E002 | 9.802-691.0 | Exhaust Deflector | 1 |
| E01 | 9.802-725.0 | Bolt, 3/8" x 1-1/2", HH NC GRD 8, Zinc | 4 |
| E02 | 9.802-807.0 | Washer, 3/8", SAE, Flat | 9 |
| E03 | 9.802-779.0 | Nut, 3/8" ESNA, NC | 4 |
| E04 | Pulley, See Parts Specifications Pages | | |
| E05 | Bushing, See Parts Specifications Pages | | |
| E051 | 9.802-710.0 | ▲ Bolt, 5/16" x 1", NC HH | 3 |
| E09 | 9.802-155.0 | Adapter, M18-1.5 x 3/8" FNPT | 1 |
| E10 | 9.802-036.0 | Nipple, 1/2" JIC, 3/8" FNPT | 1 |
| E11 | 9.802-253.0 | Hose, 1/2" Push-On | 24" |
| E12 | 9.802-151.0 | Swivel, 1/2" Female, Push-On | 2 |
| E13 | 9.802-126.0 | Plug, 1/2" JIC, Flare, 639F-8 | 1 |
| E14 | 9.802-660.0 | Shaft, Lombardini LDW602/903 | 1 |
| E16 | 9.802-203.0 | Clamp, 1/2" Ro-Clip, Kleinhuis | 1 |
| E17 | 9.802-762.0 | Screw, 10/32" x 1-1/4" RH, SL, Black | 1 |
| E18 | 9.802-695.0 | Nut, 10/32" Keps | 1 |
| E19 | 9.802-802.0 | Washer, 1/4", Flat, SAE | 1 |
| E20 | 9.802-444.0 | Wire, THWN, 6 Gauge, Red | 80" |
| E21 | 9.802-444.0 | Wire, THWN, 6 Gauge, Black | 70" |
| E22 | 9.802-487.0 | Terminal, Ring Tongue | 2 |
| E23 | 9.802-487.0 | Terminal, Ring Tongue | 2 |
| E24 | 9.802-501.0 | Connector, Battery Post | 2 |
| E25 | 9.802-587.0 | Insulation, Fiber Sleeving, 1/2" | 42" |
| E251 | 9.802-207.0 | Clamp, Round, 0.56 ID | 3 |
| E252 | 9.802-799.0 | Screw, #14 x 1", TEK, Black,Zinc | 3 |
| E26 | 9.800-011.0 | Label, RPM Factory Set | 1 |
| F00 | 9.803-021.0 | Frame Assy, 27 HP, Diesel, Black | 1 |

**LEGEND**

G = Generator E = Engine L = Fuel Tank X = Battery Box B = Beltguard W= Power Platform P = Pump
R = Controls N = Final Assembly F = Frame T = Float Tank H = Hose U = Unloader C = Coil

# EXPLODED VIEW PARTS LIST

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| G00 | 9.802-527.0 | Generator, 2FSM2PC-1/A, WINC (587) | 1 |
| G01 | 9.802-720.0 | ▲ Bolt, 3/8" x 1", NC HH (587) | 4 |
| G02 | 9.802-807.0 | Washer, 3/8", SAE, Flat (587) | 8 |
| G03 | 9.802-779.0 | Nut, 3/8", ESNA, NC (587) | 4 |
| G10 | 9.803-004.0 | Weldment, Pump/Gen. Rail (587) | 1 |
| G11 | 9.802-779.0 | Nut, 3/8", ESNA | 3 |
| G12 | 9.802-099.0 | ▲ Washer, Snubbing (587) | 3 |
| G13 | 9.802-814.0 | ▲ Washer, 3/8", Lock, Split Ring (587) | 3 |
| G25 | 9.802-733.0 | Bolt, 3/8" x 3-1/2", TAP (587) | 1 |
| G26 | 9.802-807.0 | Washer, 3/8", SAE, Flat (587) | 4 |
| G27 | 9.802-789.0 | Nut, 3/8", Hex, NC (587) | 2 |
| G30 | Pulley, See Parts Specifications Pages | | |
| G31 | | ▲ Bushing, See Parts Specifications Pages | |
| G32 | Belt, See Parts Specifications Pages | | |
| G33 | 8.752-150.0 | ▲ Cord, Moulded | 1 |
| E28 | 9.804-532.0 | ▲ Dipstick Extended Kit | 1 |
| H010 | 9.802-255.0 | Hose, 3/16", Push-On, Fuel Line | 48" |
| H011 | 9.802-200.0 | Clamp, Screw, #4 | 2 |
| H020 | 9.802-254.0 | Hose, 1/4", Push-On, Fuel Line | 40" |
| H021 | 9.802-200.0 | Clamp, Screw, #4 | 2 |
| H022 | 9.802-587.0 | Insulation, Fiber Sleeving, 1/2" | 30" |
| H023 | 9.802-207.0 | Clamp, Round, 0.56 ID | 1 |
| H024 | 9.802-741.0 | Bolt, 8mm x 16mm Hex Head | 1 |
| H025 | 9.802-813.0 | Washer, 5/16", Lock, Split Ring | 1 |
| H030 | 8.918-429.0 | Hose, 3/8" X 62", 2 Wire, Pressure | 1 |
| H040 | 9.802-252.0 | Hose, 1/4" x 1/2", Braided Vinyl | 48" |
| H041 | 6.390-126.0 | Clamp, Hose, .46 -, .54 ST | 2 |
| H050 | 9.802-251.0 | Tube, 1/4" x 1/2", Clear Vinyl | 72" |
| H051 | 9.802-200.0 | Clamp, Screw, #4 | 1 |
| H052 | 9.802-161.0 | Strainer, 1/4", Brass w/Check | 1 |
| H060 | 8.711-785.0 | Hose, 3/8", Push-on | 2 ft |
| H070 | 9.802-261.0 | Hose, 3/4", Push-On | 48" |
| H071 | 9.802-152.0 | Swivel, 3/4" SAE Female, Push-On | 2 |
| H080 | 9.802-259.0 | Hose, 1/2" Push-On | 15" |
| H081 | 9.802-151.0 | Swivel, 1/2" FJIC, Push-On | 2 |
| H090 | 8.918-421.0 | Hose, Pressure, 3/8" x 16" | 1 |
| H100 | 9.802-254.0 | Hose, 1/4", Push-On, Fuel Line | 19" |
| H101 | 9.802-200.0 | Clamp, Screw #4 | 2 |
| H110 | 9.802-254.0 | Hose, 1/4", Push-On, Fuel Line | 25" |
| H111 | 9.802-200.0 | Clamp, Screw, #4 | 2 |
| L00 | 9.803-025.0 | Fuel Tank Assembly, 20 Gallon MS | 1 |
| L01 | 9.802-804.0 | Washer, 5/16", Flat, SAE | 4 |
| L02 | 9.802-776.0 | Nut, 5/16", ESNA, NC | 4 |
| L03 | 9.802-067.0 | Bumper Pad, Engine | 4 |
| L04 | 9.802-082.0 | Cap, Fuel Tank, Plastic | 1 |
| L05 | 9.802-142.0 | Hose Barb, 1/4" Barb x 1/8" ML Pipe, 90° | 3 |
| L06 | 8.706-962.0 | Hose Barb, 3/16" Barb x 1/8" MPT, 90° | 2 |
| L07 | 9.802-124.0 | ▲ Plug, 1/4" Countersunk | 1 |
| L08 | 8.932-960.0 | Label, Diesel Fuel | 1 |
| P081 | 9.802-587.0 | Insulation, Fiber Sleeving, 22" | 1 |
| P082 | 9.802-207.0 | Clamp, Round, 0.56 ID | 2 |
| P091 | 9.802-779.0 | Bolt, 3/8", ESNA | 3 |
| P092 | 9.802-099.0 | ▲ Washer, Snubbing | 3 |
| P093 | 9.802-814.0 | ▲ Washer, 3/8" Lock, Split Ring | 3 |
| P25 | 9.802-733.0 | Bolt, 3/8" x 3-1/2", Tap | 1 |
| P26 | 9.802-807.0 | Washer, 3/8", SAE, Flat | 4 |
| P27 | 9.802-789.0 | ▲ Nut, 3/8", Hex, NC | 2 |
| P30 | Pulley, See Parts Specifications Pages | | |
| P31 | Bushing, See Parts Specifications Pages | | |
| P32 | Belt, See Parts Specifications Pages | | |
| R016 | 9.802-710.0 | Bolt, 5/16" x 1", NC HH | 4 |
| R017 | 9.802-776.0 | Nut, 5/16", ESNA, NC | 4 |
| R018 | 9.802-804.0 | Washer, 5/16", Flat, SAE | 8 |
| R070 | 9.802-188.0 | Valve, Metering, 1/4" Hose | 1 |
| R071 | 9.800-039.0 | Label, Detergent Valve | 1 |
| R100 | 9.803-020.0 | Control Panel, Black | 1 |
| R101 | 9.802-799.0 | Screw, #14 x 1", Tek, Black, Zinc | 13 |
| R102 | 8.900-870.0 | Label, Shark | 1 |
| R103 | 9.800-041.0 | Label, Warning, Text | 1 |
| R104 | 9.800-042.0 | Label, Control Panel | 1 |
| R105 | 9.800-049.0 | Label, Manufacturer's Cleaning Solution | 1 |
| R106 | 9.802-064.0 | Grommet, Rubber, Nozzle | 4 |
| R107 | | Nozzle, Please See Hose & Spray Gun Assembly | |

# EXPLODED VIEW PARTS LIST

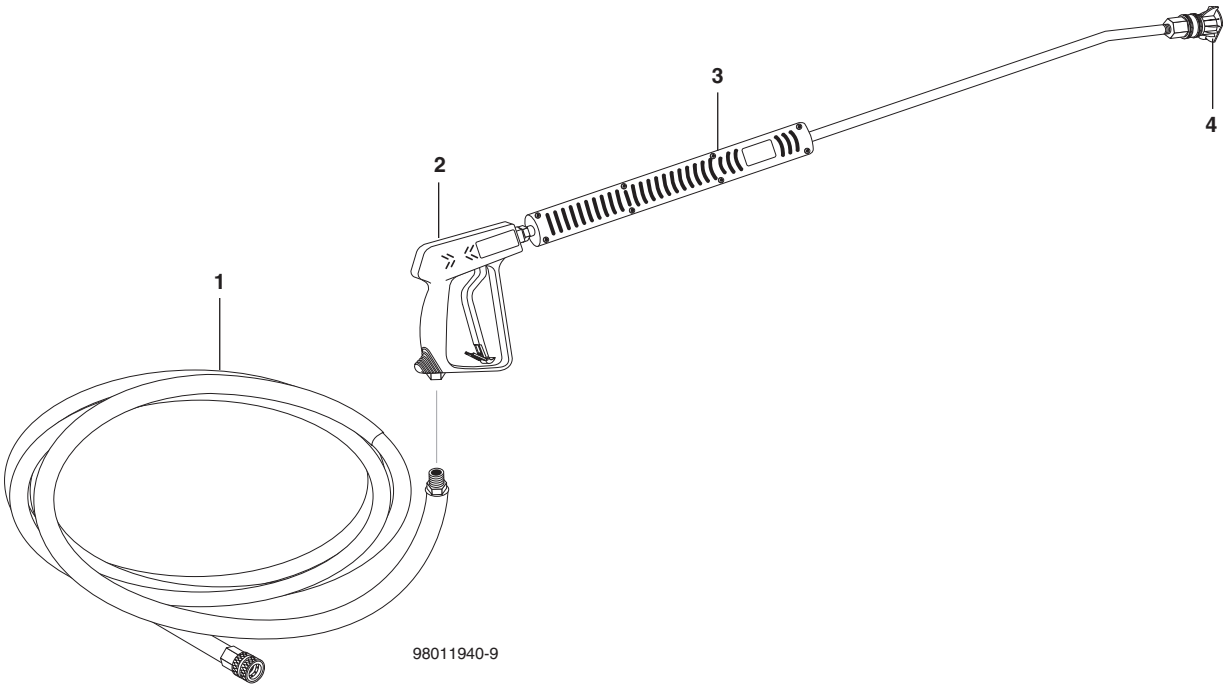
| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| U021 | 9.802-730.0 | Bolt, 3/8" x 2-1/2", Grade 5, Zinc | 2 |
| U022 | 9.802-807.0 | Washer, 3/8", SAE, Flat | 2 |
| U023 | 9.802-779.0 | Nut, 3/8", ESNA, NC | 2 |
| W00 | 9.803-022.0 | Assy, Power Platform, Diesel | 1 |
| X00 | 9.802-075.0 | Box, Battery, M100 | 1 |
| X01 | 9.802-701.0 | Bolt, 1/4" x 1", Hex Head | 4 |
| X02 | 9.802-773.0 | Nut, 1/4", ESNA, NC | 4 |
| X03 | 9.802-802.0 | Washer, 1/4", Flat, SAE | 8 |
| X04 | 9.802-067.0 | Bumper Pad, Engine | 4 |
| X05 | 9.802-076.0 | Plate, Battery Box, Large, PO | 1 |

▲ Not Shown

**LEGEND**

| | | | | | | |
|---|---|---|---|---|---|---|
| G = Generator | E = Engine | L = Fuel Tank | X = Battery Box | B = Beltguard | W= Power Platform | P = Pump |
| R = Controls | N = Final Assembly | F = Frame | T = Float Tank | H = Hose | U = Unloader | C = Coil |

# HOSE & SPRAY GUN ASSEMBLY



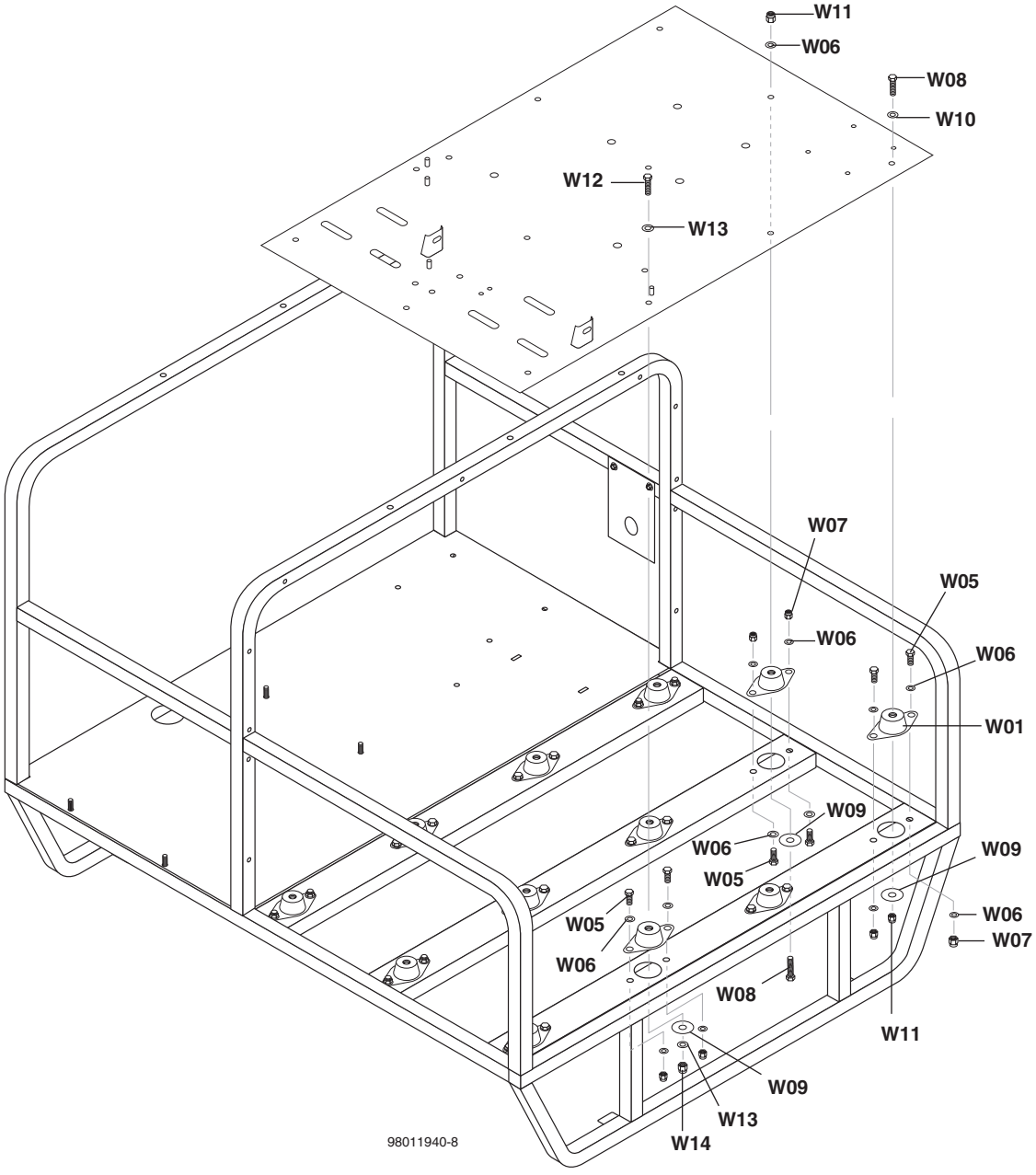

# HOSE & SPRAY GUN PARTS LIST

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 8.739-203.0 | Hose, 3/8" x 50', 2 Wire, Tuff-Flex | 1 |
| 2 | 8.710-384.0 | Gun, ST-1500, 5000 10.4 GPM | 1 |
| 3 | 9.803-805.0 | Wand | 1 |
| 4 | 9.802-307.0 | Nozzle, 0006, Red | 1 |
| | 9.802-308.0 | Nozzle, 1506, Yellow | 1 |
| | 9.802-309.0 | Nozzle, 2506, Green | 1 |
| | 9.802-310.0 | Nozzle, 4006, White | 1 |

**LEGEND**

| | | | | | | |
|---|---|---|---|---|---|---|
| G = Generator | E = Engine | L = Fuel Tank | X = Battery Box | B = Beltguard | W= Power Platform | P = Pump |
| R = Controls | N = Final Assembly | F = Frame | T = Float Tank | H = Hose | U = Unloader | C = Coil |

# PLATFORM ISOLATOR EXPLODED VIEW




**LEGEND**

| | | | | | | |
|---|---|---|---|---|---|---|
| G = Generator | E = Engine | L = Fuel Tank | X = Battery Box | B = Beltguard | W= Power Platform | P = Pump |
| R = Controls | N = Final Assembly | F = Frame | T = Float Tank | H = Hose | U = Unloader | C = Coil |

# PLATFORM ISOLATOR PARTS LIST

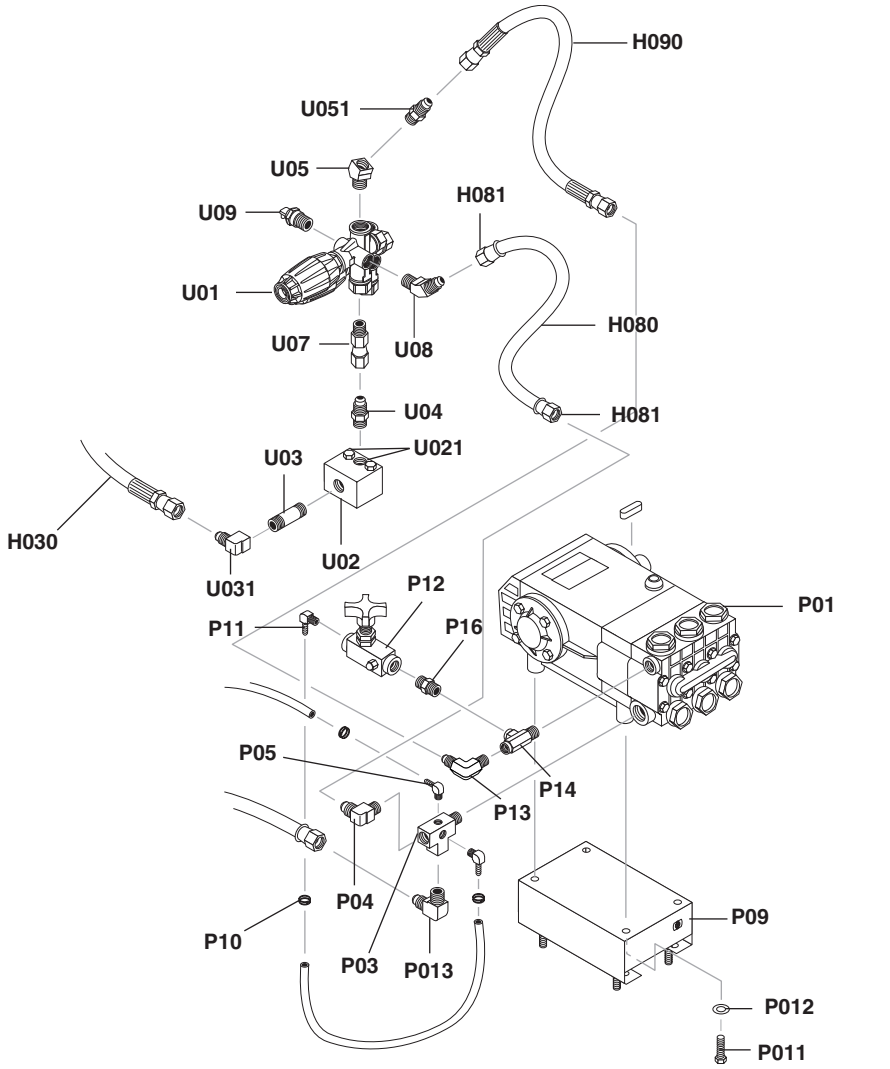
| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| W01 | 9.802-057.0 | Isolator, Vibration Mount, 100L | 12 |
| W05 | 9.802-710.0 | Bolt, 5/16" x 1", NC HH | 24 |
| W06 | 9.802-804.0 | Washer, 5/16", Flat, SAE | 48 |
| W07 | 9.802-776.0 | Nut, 5/16", ESNA, NC | 24 |
| W08 | 9.802-730.0 | Bolt, 3/8" x 2-1/2" Grade 5 Zinc | 10 |
| W09 | 9.802-099.0 | Washer, Snubbing | 12 |
| W10 | 9.802-807.0 | Washer, 3/8", SAE, Flat | 10 |
| W11 | 9.802-779.0 | Nut, 3/8", ESNA, NC | 10 |
| W12 | 9.802-717.0 | Bolt, 5/16" x 2-1/2", NC HH | 2 |
| W13 | 9.802-804.0 | Washer, 5/16", Flat, SAE | 4 |
| W14 | 9.802-776.0 | Nut, 5/16", ESNA, NC | 2 |



**LEGEND**

G = Generator E = Engine L = Fuel Tank X = Battery Box B = Beltguard W= Power Platform P = Pump
R = Controls N = Final Assembly F = Frame T = Float Tank H = Hose U = Unloader C = Coil

# PUMP ASSEMBLY EXPLODED VIEW

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**LEGEND**

| | | | | | | |
|---|---|---|---|---|---|---|
| G = Generator | E = Engine | N = Final Assembly | F = Frame | T = Float Tank | H = Hose | U = Unloader |
| R = Controls | | L = Fuel Tank | X = Battery Box | B = Beltguard | W= Power Platform | P = Pump |
| | | | | | | C = Coil |

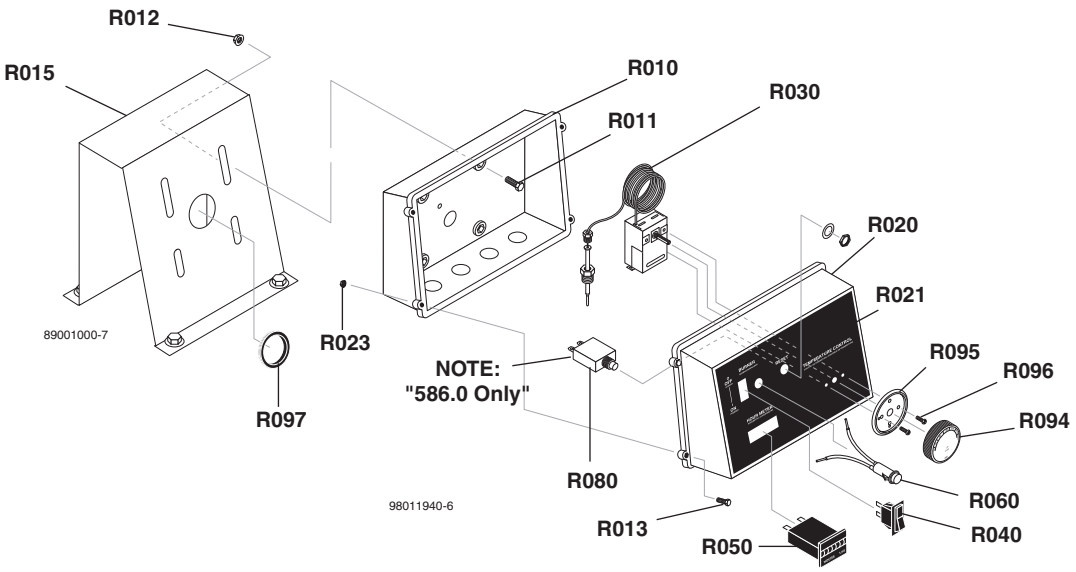
# PUMP ASSEMBLIES PARTS LIST

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| H030 | 8.918-429.0 | Hose, 3/8" Pressure | 60" |
| H080 | 9.802-254.0 | Hose, 1/2" Push-On | 19" |
| H081 | 9.802-151.0 | Swivel, 1/2" JIC Fem, Push-On | 2 |
| H090 | 8.711-653.0 | Hose, 3/8" Pressure | 16" |
| P01 | 8.904-806.0 | Pump, ST6035R.1 | 1 |
| P011 | 9.803-042.0 | Screw, Pump | 4 |
| P012 | 9.803-042.0 | Washer, Lock, Pump | 4 |
| P013 | 9.802-132.0 | Elbow, 3/4" JIC x 1/2" 90° | 1 |
| P03 | 9.803-050.0 | Tee, 1/2" with 1/8" Hole, Street | 1 |
| P04 | 9.802-131.0 | Elbow, 1/2" JIC, 1/2", 90° | 1 |
| P05 | 8.706-955.0 | Hose Barb, 1/4" Barb x 1/8" ML Pipe, 90° | 2 |
| P09 | 9.803-013.0 | Weldment, Pump Rail, Wide | 1 |
| P10 | 6.390-126.0 | Clamp, Hose | 1 |
| P11 | 8.706-958.0 | Hose Barb, 1/4" Barb x 1/4" ML Pipe, 90° | 1 |
| P12 | 9.802-187.0 | Valve, Steam | 1 |
| P13 | 9.802-039.0 | Elbow, 1/2" JIC x 3/8" MPT Street | 1 |
| P14 | 8.706-234.0 | Tee, 3/8" Street | 1 |
| P16 | 8.706-120.0 | Nipple, 3/8" x 1/4", Hex Steel | 1 |
| U01 | 8.750-299.0 | Unloader, VRT 3, 8 GPM @ 4500 PSI | 1 |
| U02 | 9.802-869.0 | Block Unloader, 1/2" x 1/2", Brass | 1 |
| U021 | 9.802-731.0 | Bolt, 3/8" x 3" | 2 |
| U03 | 9.802-013.0 | Nipple, 1/2" x 2-1/2", Galv. SCH 80 | 1 |
| U031 | 9.802-043.0 | Elbow, 1/2" FNPT x 1/2" MJIC | 1 |
| U04 | 9.802-038.0 | Nipple, 1/2" JIC, 1/2" Pipe | 1 |
| U05 | 9.802-041.0 | Elbow, 3/8", Street, 45° | 1 |
| U051 | 9.802-036.0 | Nipple, 1/2" MJIC x 3/8" NPT | 1 |
| U07 | 9.802-048.0 | Swivel, 1/2" JIC Female, 3/8" Male | 1 |
| U08 | 9.802-133.0 | Elbow, 1/2" JIC x 3/8", 45° | 1 |
| U09 | 8.707-254.0 | Pump Protector, 3/8" PTP | 1 |

**LEGEND**

| | | | | | | |
|---|---|---|---|---|---|---|
| G = Generator | E = Engine | L = Fuel Tank | X = Battery Box | B = Beltguard | W= Power Platform | P = Pump |
| R = Controls | N = Final Assembly | F = Frame | T = Float Tank | H = Hose | U = Unloader | C = Coil |

# CONTROL BOX EXPLODED VIEW




# CONTROL BOX PARTS LIST

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| R010 | 9.803-693.0 | Box, Plastic, Back | 1 |
| R011 | 9.802-700.0 | Bolt, 1/4" x 3/4", NC HH | 4 |
| R012 | 9.802-775.0 | Nut, 1/4", Flange, ZN | 4 |
| R013 | 9.803.249.0 | Screw, M4 x 10 | 4 |
| R015 | 8.912-806.0 | Bracket, Electrical Box, Black | 1 |
| R020 | 9.802-482.0 | Box, Plastic Front, Fabricated | 1 |
| R021 | 9.800-043.0 | Label, Electrical Box, w/o Reset (587.0) | 1 |
| | 9.800-044.0 | Label, Electrical Box, w/Reset (586.0) | 1 |
| R022 | 9.800-040.0 | ▲ Label, Ground | 1 |
| R023 | 9.803-250.0 | Nut (Electrical Bin) | 4 |
| R030 | 8.750-094.0 | Thermostat, Adjustable, 302°F | 1 |
| R031 | 9.802-447.0 | ▲ Conduit, Corrugated, Tubing | 36" |
| R040 | 9.802-453.0 | Switch, Curvette | 1 |
| R050 | 9.802-283.0 | Hour Meter | 1 |

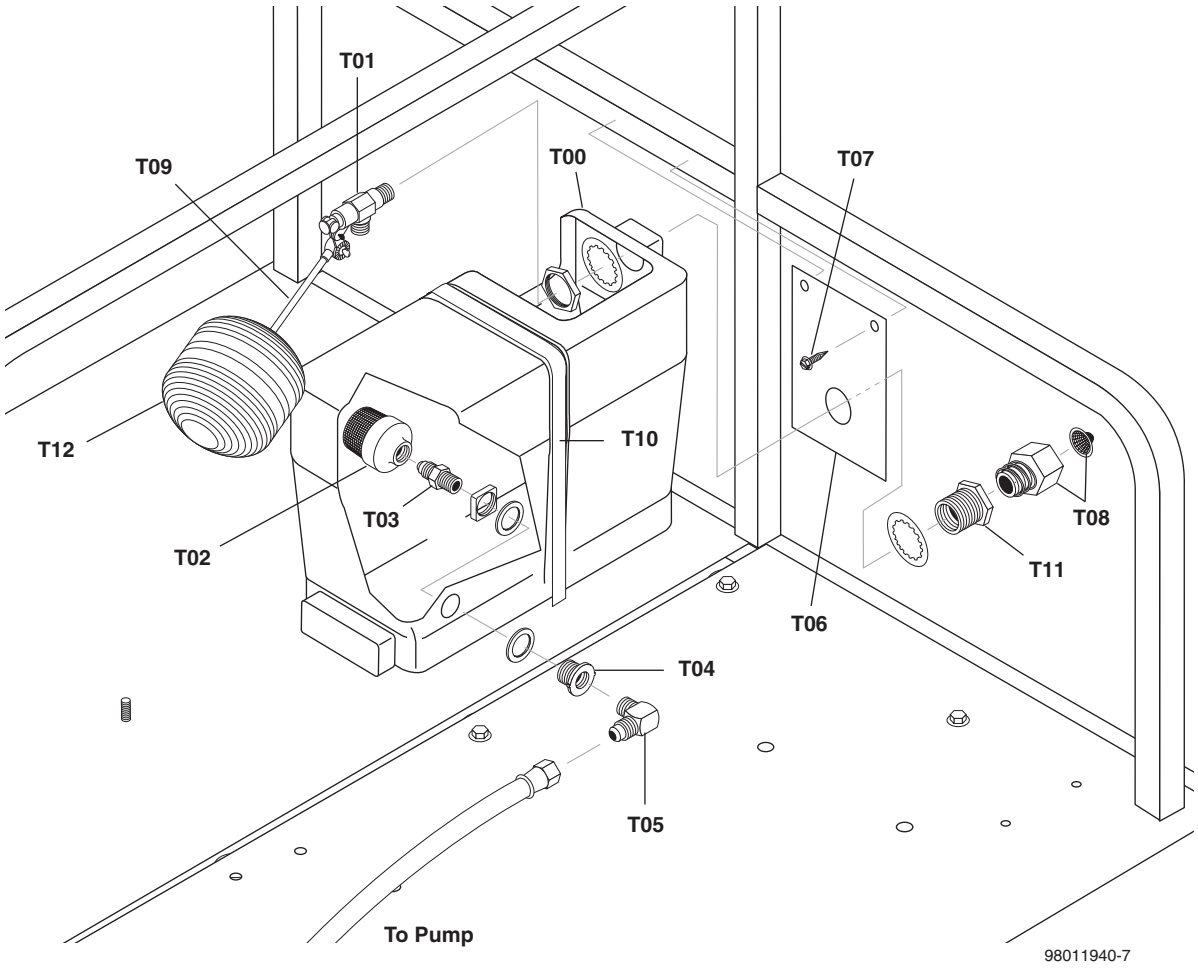
| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| R060 | 9.802-455.0 | Light Indicator, Green 115V (587.0) | 1 |
| | 9.802-456.0 | Light Indicator, Green 12V (586.0) | 1 |
| R080 | 9.802-485.0 | Breaker (586.0) | 1 |
| R090 | 9.802-470.0 | ▲ Relay, P&B, 12V/40A (586.0) | 1 |
| R091 | 9.802-771.0 | ▲ Screw, 10/32" x 3/4" BH SOC CS | 1 |
| R092 | 9.802-762.0 | ▲ Screw, 10/32" x 1-1/4", Ground | 1 |
| R093 | 9.802-695.0 | ▲ Nut, 10/32" | 8 |
| R094 | 8.750-096.0 | Knob, Thermostat | 1 |
| R095 | 8.712-190.0 | Bezel, Thermostat | 1 |
| R096 | 8.718-779.0 | Screw, 4mm x 6mm | 2 |
| R097 | 9.802-104.0 | Grommet | 1 |

▲ Not Shown

**LEGEND**

G = Generator E = Engine L = Fuel Tank X = Battery Box H = Hose U = Unloader C = Coil
R = Controls N = Final Assembly F = Frame B = Beltguard W= Power Platform P = Pump

# FLOAT TANK ASSEMBLY




# FLOAT TANK PARTS LIST

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| T00 | 9.804-042.0 | Tank, Float, 2-1/2 Gallon, Blank | 1 |
| T01 | 8.749-328.0 | Valve, Float, PVC | 1 |
| T02 | 9.802-162.0 | Strainer, 1/2" Basket | 1 |
| T03 | 9.802-128.0 | Nipple, 1/2" JIC x 1/2" MPT | 1 |
| T04 | 8.750-743.0 | Bulkhead, 1/2" Polypro | 1 |
| T05 | 9.802-132.0 | Elbow, 3/4" JIC x 1/2", 90° | 1 |
| T06 | 9.803-007.0 | Support Plate, Float Tank | 1 |
| T07 | 9.802-799.0 | Screw, #14 x 1", TEK, Black, Zinc | 2 |
| T08 | 9.802-146.0 | Swivel, 1/2" MP x 3/4" GHF w/Strainer | 1 |

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| T09 | 9.803-671.0 | Stem, 5" Float | 1 |
| T10 | 9.802-512.0 | Cable, TY, 48" | 1 |
| T11 | 9.802-150.0 | Anchor, Connector, 1/2" | 1 |
| T12 | 9.802-061.0 | Ball, Float, Black Plastic | 1 |

**LEGEND**

G = Generator, E = Engine, L = Fuel Tank, X = Battery Box, B = Beltguard, W= Power Platform, P = Pump
R = Controls, N = Final Assembly, F = Frame, H = Hose, U = Unloader, C = Coil

# SPECIFICATIONS

## BECKETT BURNER SPECIFICATIONS

| Model No. | Burner Assy No. | Fuel Nozzle | Igniter | Burner Motor | Fuel Pump/ Solenoid/Cord | Fuel Solenoid Coil | Electrode |
|---|---|---|---|---|---|---|---|
| 1.110-586.0 | 9.802-559.0 | 9.802-577.0 | 9.802-663.0 | 9.802-638.0 | 9.802-562.0 | 9.802-634.0 | 9.802-668.0 |
| 1.110-587.0 | 9.802-556.0 | 8.717-366.0 | 9.803-060.0 | 9.803-056.0 | 9.802-645.0 | 9.802-640.0 | 9.802-669.0 |

## CLEAR FLAME BURNER SPECIFICATIONS

| Model No. | Burner Assy No. | Fuel Nozzle | Igniter | Burner Motor | Fuel Pump/ Solenoid/Cord | Fuel Solenoid Coil | Electrode |
|---|---|---|---|---|---|---|---|
| 1.110-586.0 | 8.918-919.0 | 8.717-273.0 | 8.919-116.0 | 8.751-074.0 | 8.700-758.0 | 9.802-639.0 | 8.751-342.0 |
| 1.110-587.0 | 8.920-645.0 | 8.717-366.0 | 8.919-114.0 | 8.752-930.0 | 8.700-759.0 | 9.802-640.0 | 8.750-778.0 |

## PART SPECIFICATIONS

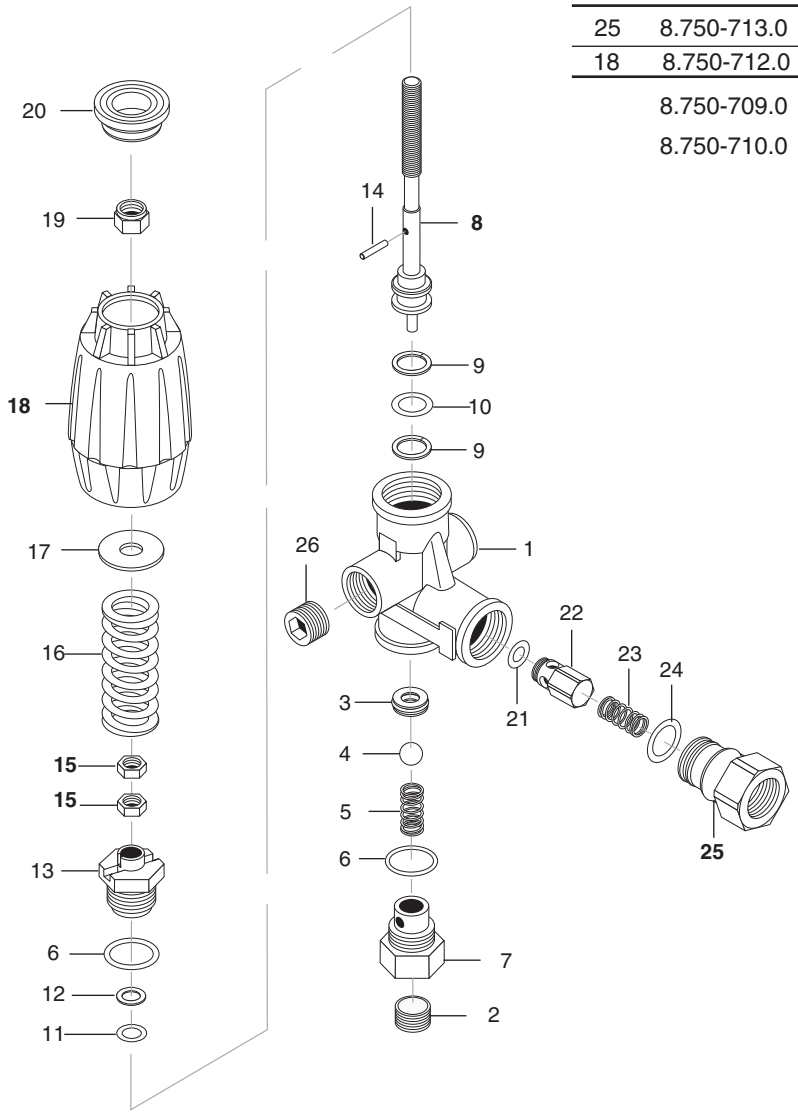
| | PUMP | | | | | | ENGINE | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Machine Model** | Pump Model | Part # | Unloader | Pulley | Pulley Part # | Bushing | Bushing Part # | Engine Size | Engine Part# | Engine Pulley | Pulley Part# |
| 1.110-586.0 | ST6035R.1 | 8.904-806.0 | 9.802-366.0 | 2BK80H | 9.802-389.0 | 25MM | 9.802-403.0 | 27 HP | 9.802-327.0 | 3TB40 | 9.802-394.0 |
| 1.110-587.0 | ST6035R.1 | 8.904-806.0 | 9.802-366.0 | 2BK80H | 9.802-389.0 | 25MM | 9.802-403.0 | 27 HP | 9.802-327.0 | 3TB40 | 9.802-394.0 |

| | ENGINE (CON'T) | | | | GENERATOR | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Model** (Con't) | Bushing | Bushing Part # | Belt Size | Belt Part # | Pulley | Pulley Part# | Belts | Belt Part # | Bushing | Bushing Part# |
| 1.110-586.0 | P2 x 1-1/2 | 9.802-406.0 | BX 32 | 9.802-413.0 | NA | NA | NA | NA | NA | NA |
| 1.110-587.0 | P2 x 1-1/2 | 9.802-406.0 | BX 32 | 9.802-413.0 | BK36 | 9.802-379.0 | BX22 | 9.802-412.0 | 5/8 | 9.802-397.0 |

# VRT3 UNLOADER EXPLODED VIEW AND PARTS LIST

**8.750-297.0,** 8 GPM, 2320 PSI
**8.750-298.0,** 8 GPM, 3630 PSI
**8.750-299.0,** 8 GPM, 4500 PSI

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 25 | 8.750-713.0 | Outlet Fitting | 1 |
| 18 | 8.750-712.0 | Knob, Unloader | 1 |
| | 8.750-709.0 | Repair Kit, VRT3, 2320/3630 PSI | |
| | 8.750-710.0 | Repair Kit, VRT3, 4500 PSI | |
| | | (Kit Items: 3, 4, 6, 9-12, 21, 24) | |




## Unloader Adjustment Procedures

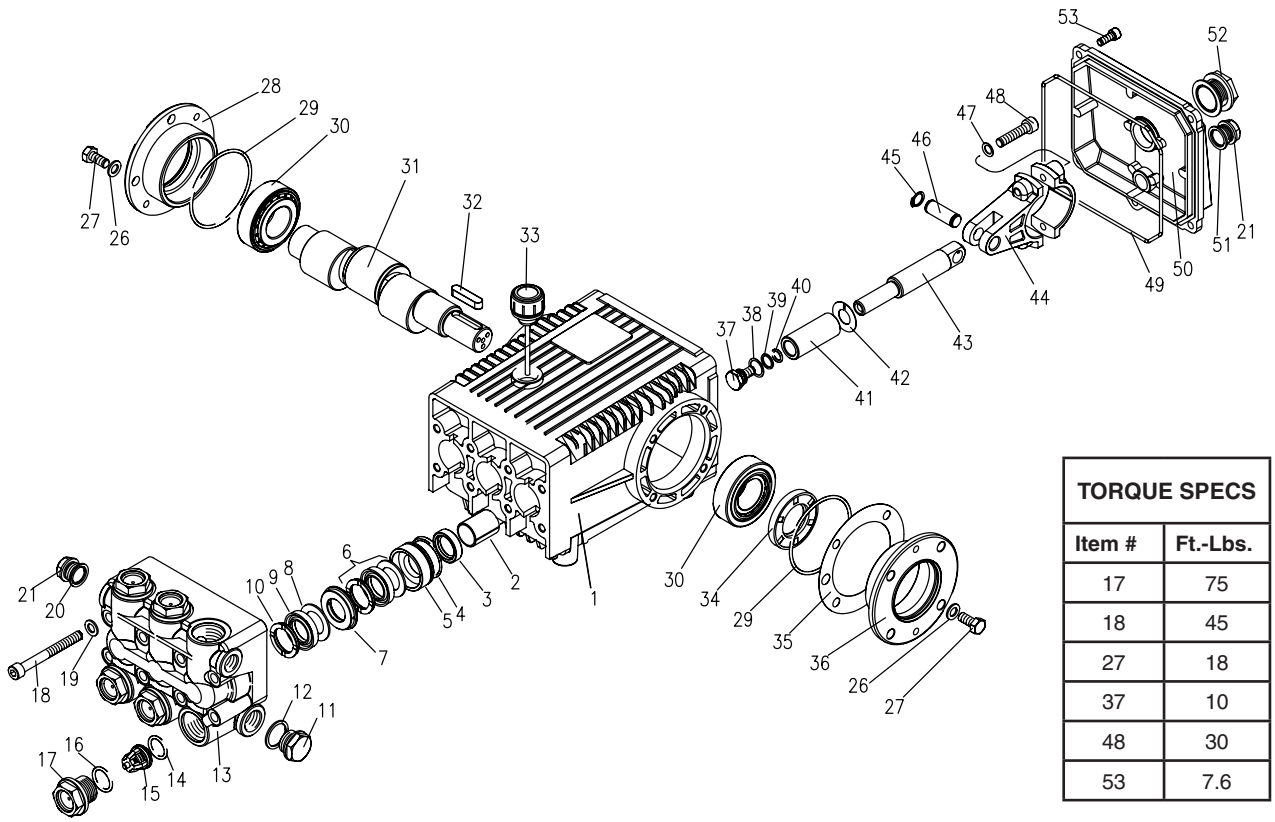
1. Remove lock nut (Item 19).
2. Remove adjustment knob (Item 18).
3. Loosen the two (2) nuts (Item 15), move them upward on stem (Item 8) until you see 4 or more threads below the nut.
4. Re-attach adjusting knob (Item 18).
5. Start machine. Open the trigger of the spray gun. Increase pressure by turning adjustment knob (Item 18) clockwise until pressure is at the desired operating pressure.
6. Remove the adjustment knob (Item 18), tighten the lower nut (Item 15) tightly against the upper nut (Item 15). Re-attach adjustment knob (Item 18) and screw down until contact is made with the nuts (Items 15). Screw down lock nut (Item 19) onto the stem (Item 8) until the threads cut into the nylon insert of the lock nut (Item 19).

***If adjustment knob (Item 18) **DOES NOT** make contact with upper nut (Items 15), remove adjusting knob (Item 18), re-adjust (raise) nuts (Items 15) on stem (Item 8) and re-attach adjustment knob (Item 18), then repeat step #6.

****If adjustment knob (Item 18) **DOES** make contact with upper nut; release the trigger of the spray gun and watch the pressure gauge for the pressure increase ("spike"). This "spike" **SHOULD NOT** exceed 500 psi above the operating pressure. If "spike" pressure exceeds the 500 psi limit, remove the adjusting knob (Item 18) and re-adjust (lower) the nuts (Items 15) on the stem (Item 8). Re-attach the adjusting knob (Item 18), then repeat step #6.

# ST.1 SERIES PUMP EXPLODED VIEW

**8.904-806.0 ST6035R.1 Right**




| TORQUE SPECS | |
|---|---|
| **Item #** | **Ft.-Lbs.** |
| 17 | 75 |
| 18 | 45 |
| 27 | 18 |
| 37 | 10 |
| 48 | 30 |
| 53 | 7.6 |

# ST.1 SERIES PUMP EXPLODED VIEW & PARTS LIST

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 9.804-604.0 | Crankcase | 1 |
| 2 | 9.803-195.0 | Plunger Guide | 3 |
| 3* | See Kit | Plunger Oil Seal | 3 |
| 4* | See Kit | O-Ring Ø1.78 x 31. 47 | 3 |
| 5* | See Kit | Pressure Ring, Brass | 3 |
| 6* | See Kit | "U" Seal Low Pressure | 3 |
| 7* | See Kit | Intermediate Ring, Brass | 3 |
| 8* | See Kit | Support Ring, Teflon Bronze | 3 |
| 9* | See Kit | "U" Seal High Pressure | 3 |
| 10* | See Kit | Support Ring | 3 |
| 11 | 9.802-926.0 | Brass Plug, 1/2" | 1 |
| 12 | 9.803-199.0 | Copper Washer 1/2" | 1 |
| 13 | 9.802-933.0 | Manifold Head | 1 |
| 14* | See Kit | O-Ring Ø2.62 x 17.13 | 6 |
| 15* | See Kit | Valve Assembly | 6 |
| 16 | See Kit | O-Ring Ø2.62 x 20.29 | 6 |
| 17 | 9.802-928.0 | Valve Plug | 6 |
| 18 | 9.802-943.0 | Manifold Stud Bolt | 8 |

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 19 | 9.802-890.0 | Washer | 8 |
| 20 | 9.803-198.0 | Copper Washer 3/8" | 1 |
| 21 | 9.802-925.0 | Brass Plug 3/8" | 1 |
| 26 | 9.802-884.0 | Washer | 8 |
| 27 | 9.802-944.0 | Hexagonal Screw | 8 |
| 28 | 9.803-182.0 | Closed Bearing Housing | 1 |
| 29 | 9.803-186.0 | O-Ring Ø2.62 x 71.12 | 2 |
| 30 | 9.803-160.0 | Roller Bearing, Tapered | 2 |
| 31 | 9.803-148.0 | Crankshaft (GT4040.1, 5030.1, 6035.1) | 1 |
| | 9.803-149.0 | Crankshaft (GT 4035.1) | 1 |
| 32 | 9.803-167.0 | Crankshaft Key | 1 |
| 33 | 9.802-923.0 | Oil Dip Stick | 1 |
| 34 | 9.803-139.0 | Crankshaft Seal | 1 |
| 35 | 9.803-177.0 | Shim | 2 |
| 36 | 9.803-181.0 | Bearing Housing | 1 |
| 37* | See Kit | Plunger Bolt | 3 |
| 38* | See Kit | Copper Spacer | 3 |

# ST.1 SERIES PUMP EXPLODED VIEW & PARTS LIST

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 39* | See Kit | O-Ring Ø1.78 x10.82 | 3 |
| 40* | See Kit | Teflon Ring | 3 |
| 41* | See Kit | Plunger | 3 |
| 42* | See Kit | Copper Spacer | 3 |
| 43 | 9.803-143.0 | Plunger Rod | 3 |
| 44 | 9.803-157.0 | Connecting Rod | 3 |
| 45 | 9.802-912.0 | Snap Ring | 6 |
| 46 | 9.802-915.0 | Connecting Rod Pin | 3 |
| 47 | 9.802-889.0 | Spring Washer | 6 |
| 48 | 9.802-937.0 | Connecting Rod Screw | 6 |
| 49 | 9.803-194.0 | O-Ring Ø2.62 x 152.07 | 1 |
| 50 | 9.803-166.0 | Crankcase Cover | 1 |
| 51 | 9.803-197.0 | Gasket, G3/8 | 1 |
| 52 | 9.803-202.0 | Sight Glass G3/4 | 1 |
| 53 | 9.802-939.0 | Cover Screw | 5 |

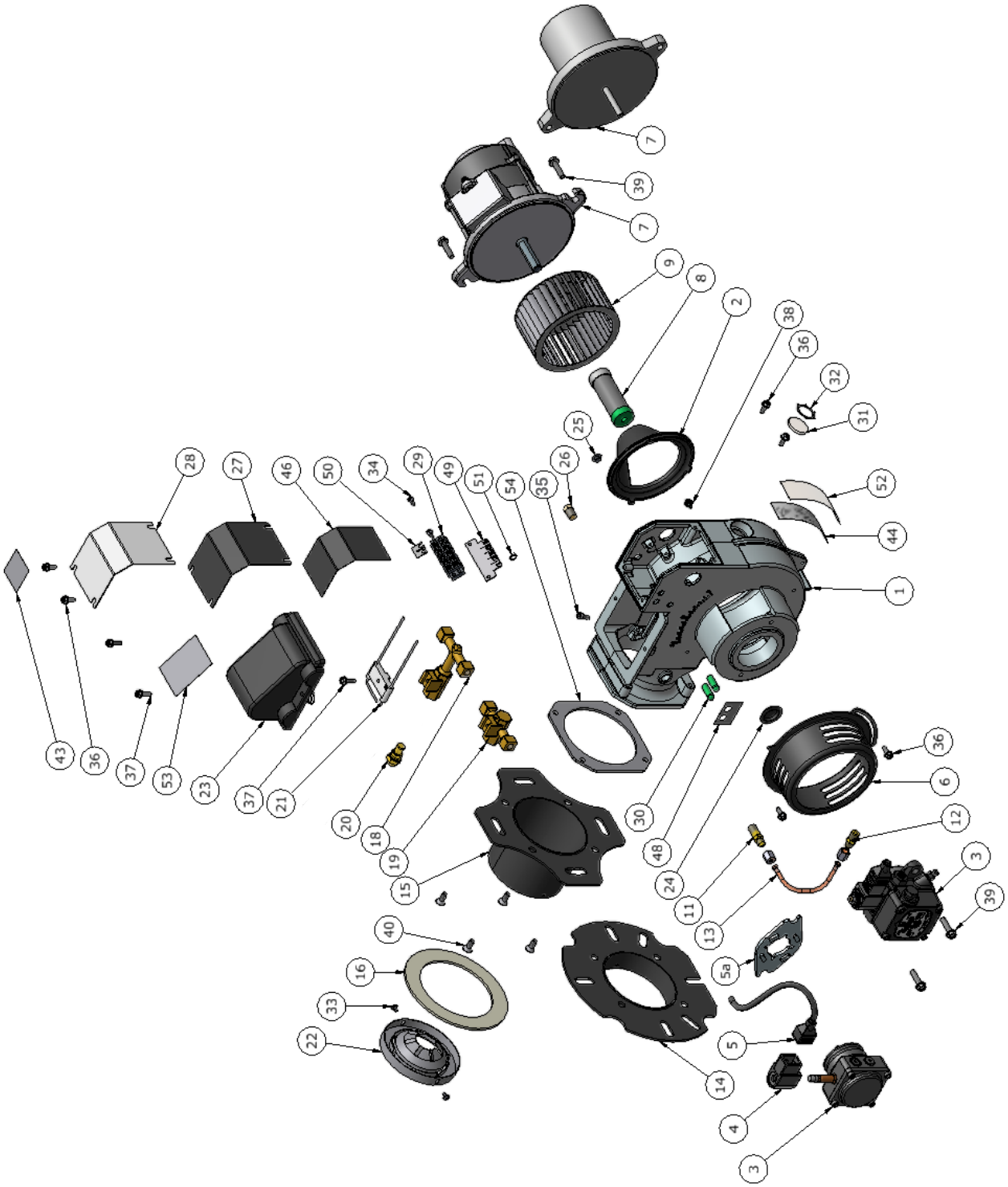
* Part available in kit (See below)

| REPAIR KIT NUMBER | **8.916-488.0** | **8.916-487.0** | **8.916-322.0** | **8.916-323.0** | **9.802-607.0** | **9.802-611.0** | **9.802-603.0** | **9.802-606.0** |
|---|---|---|---|---|---|---|---|---|
| KIT DESCRIPTION | Plunger "U" Seal 20mm 4040.1 6035.1 4035.1 | Plunger "U" Seal 22mm 5030.1 | "U" Seal Packing Assy 20mm 4040.1 6035.1 4035.1 | "U" Seal Packing Assy 22mm 5030.1 | Plunger 20mm 4040.1 6035.1 4035.1 | Plunger 22mm 5030.1 | Complete Valve (all pumps) | Plunger Oil Seals (all pumps) |
| ITEM NO.S INCLUDED | 4, 6, 8, 9, 10 | 4, 6, 8, 9, 10 | 4, 5, 6, 7, 8, 9, 10, | 4, 5, 6, 7, 8, 9, 10, | 37, 38, 39, 40, 41, 42 | 37, 38, 39, 40, 41, 42 | 14, 15, 16 | 3 |
| NUMBER OF CYLINDERS KIT WILL SERVICE | 3 | 3 | 1 | 1 | 1 | 1 | 6 | 3 |

# CLEAR FLAME BURNER "S" REPLACEMENT PARTS

***For best performance specify genuine KNA replacement parts***

**8.918-919.0**



# CLEAR FLAME BURNER "S" REPLACEMENT PARTS

***For best performance specify genuine KNA replacement parts***

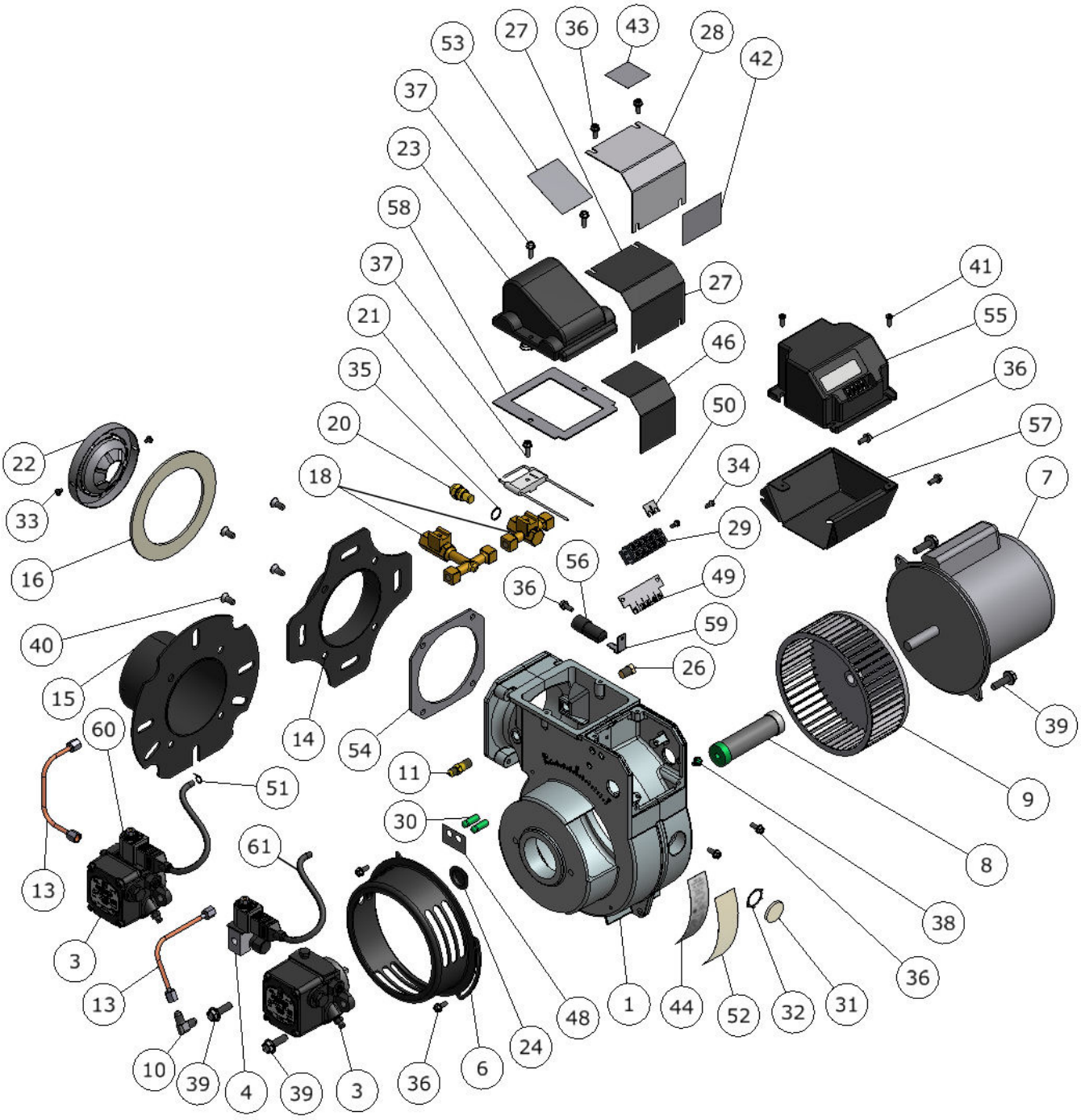
| Item # | Part # | Description | Qty |
|---|---|---|---|
| 1 | 8.919-050.0 | BURNER HOUSING ASSEMBLY | 1 |
| 2 | 8.751-160.0 | AIR GUIDE | |
| 3 | 8.700-758.0 | FUEL PUMP, SUNTEC A2VA-3106 12-24V SOL | 1 |
| 3 | 8.700-759.0 | FUEL PUMP, SUNTEC A2VA-3106 120V SOL | 1 |
| 3 | 8.700-760.0 | FUEL PUMP, SUNTEC A2VA-3106 230V SOL | 1 |
| 3 | 8.753-000.0 | FUEL PUMP, DANFOSS 071N1298 | 1 |
| 4 | 8.750-762.0 | COIL, SOLENOID DANFOSS 230V | 1 |
| 4 | 8.750-763.0 | COIL, SOLENOID DANFOSS 115V | 1 |
| 4 | 8.750-764.0 | COIL, SOLENOID DANFOSS 12-24V | 1 |
| 5 | 8.750-765.0 | CABLE, SOLENOID COIL, DANFOSS | 1 |
| 5a | 8.750-783.0 | MOUNTING KIT, FLANGE/HUB, DANFOSS | 1 |
| 6 | 8.750-541.0 | AIR BAND | 1 |
| 7 | 8.750-517.0 | MOTOR, 1/6 HP 115V 60Hz | 1 |
| 7 | 8.750-518.0 | MOTOR, 1/6 HP 230V 60Hz | 1 |
| 7 | 8.751-074.0 | MOTOR, 1/7 HP 12VDC AMETEK | 1 |
| 8 | 8.750-543.0 | COUPLING, FLEX, 1/2" x 5/16" | 1 |
| 8 | 8.751-073.0 | COUPLING, FLEX, 5/16" x 5/16" | 1 |
| 9 | 8.750-520.0 | FAN, 4.53" X 2.42", 1/2" BORE, F115-62S | 1 |
| 9 | 8.751-072.0 | FAN, 4.53" x 2.42" x .313 BORE, F115-625 | 1 |
| 11 | 8.750-547.0 | CONNECTOR, 37 DEG FLARE X 1/8" NPT, LONG | 1 |
| 12 | 8.750-545.0 | CONNECTOR, 37 DEG FLARE X 1/8" NPT | 1 |
| 13 | 8.749-000.0 | FUEL LINE ASSEMBLY | 1 |
| 14 | 8.752-034.0 | FLANGE, KNA BURNER, 1" TUBE | 1 |
| 15 | 8.752-035.0 | FLANGE, KNA BURNER, 3" TUBE | 1 |
| 16 | 8.750-539.0 | GASKET, FLANGE | 1 |
| 18 | 8.750-526.0 | GUN, ELECTRODE / NOZZLE, 3" | 1 |
| 19 | 8.750-525.0 | GUN, ELECTRODE / NOZZLE, 1" | 1 |
| 20 | Varies | NOZZLE, FUEL | 1 |
| 21 | 8.750-778.0 | ELECTRODE, IGNITION, AC | 1 |
| 21 | 8.751-342.0 | ELECTRODE, IGNITION, DC | 1 |
| 22 | 8.750-779.0 | CONE, AIR F4 | 1 |
| 22 | 8.750-782.0 | CONE, AIR F6 | 1 |
| 22 | 8.750-780.0 | CONE, AIR F12 | 1 |
| 22 | 8.750-781.0 | CONE, AIR F22 | 1 |
| 23 | 8.919-114.0 | IGNITOR, BURNER 120V | 1 |
| 23 | 8.919-115.0 | IGNITOR, BURNER 230V | 1 |
| 23 | 8.919-116.0 | IGNITOR, BURNER 12VDC | 1 |

| Item # | Part # | Description | Qty |
|---|---|---|---|
| 25 | 8.750-830.0 | PLUG, HOLE 0.285 PLASTIC | 1 |
| 26 | 8.751-134.0 | PLUG, 1/8" NPT x HEX SHOULDER | 1 |
| 27 | 8.918-454.0 | GASKET, JUNCTION BOX | 1 |
| 28 | 8.750-542.0 | COVER, JUNCTION BOX | 1 |
| 29 | 8.750-116.0 | BLOCK, TERMINAL, 5 POLE | 1 |
| 30 | 8.750-817.0 | LIGHT, INDICATOR, GREEN 14V | 2 |
| 30 | 8.750-818.0 | LIGHT, INDICATOR, GREEN 28V | 1 |
| 30 | 8.750-819.0 | LIGHT, INDICATOR, GREEN 125V | 1 |
| 30 | 8.750-820.0 | LIGHT, INDICATOR, GREEN 250V | 1 |
| 31 | 8.750-784.0 | SITE GLASS | 1 |
| 32 | 8.750-785.0 | RING, PUSH ON INTERNAL, 1305-112 | 1 |
| 33 | 8.733-001.0 | SCREW, 8 x 1/4" HI LOW THREAD CUT, PPH | 2 |
| 34 | 8.718-762.0 | SCREW, 8-32 X 1/2", M PH RDH PL | 2 |
| 35 | 9.802-745.0 | Screw, 10/32 x 1/2" SHCS | 1 |
| 36 | 8.718-810.0 | SCREW, 10/32 x 1/2", WHIZ LOC FLANGE | 6 |
| 37 | 8.750-770.0 | SCREW, 10/32 x 5/8", WHIZ LOC FLANGE | 3 |
| 38 | 8.750-816.0 | SCREW, 10/32 X 1/4" GROUNDING | 1 |
| 39 | 8.750-768.0 | SCREW, 1/4-20 x 1", WHIZ LOC FLANGE | 4 |
| 40 | 8.750-771.0 | SCREW, 1/4-20 X 1/2", PHIL FHMS | 4 |
| 42 | — | LABEL, BRAND NAME | 1 |
| 43 | 9.801-268.0 | LABEL, DISCONNECT POWER SUPPLY | 1 |
| 44 | — | LABEL, SERIAL PLATE | 1 |
| 46 | 9.807-339.0 | LABEL, WIRING DIAGRAM, BURNER 115V-115V | 1 |
| 46 | 9.807-340.0 | LABEL, WIRING DIAGRAM, BURNER 230V-230V | 4 |
| 46 | 9.807-341.0 | LABEL, WIRING DIAGRAM, BURNER 230V-115V | 1 |
| 46 | 9.807-342.0 | LABEL, WIRING DIAGRAM, BURNER 115V-24V | 1 |
| 46 | 9.807-343.0 | LABEL, WIRING DIAGRAM, BURNER 230V-24V | 1 |
| 46 | 9.807-344.0 | LABEL, WIRING DIAGRAM, BURNER 12VDC | 1 |
| 48 | 9.801-274.0 | LABEL, BURNER LIGHTS | 1 |
| 49 | 8.919-105.0 | PLATE, TERMINAL BLOCK NUMBERS | 1 |
| 50 | 8.716-451.0 | TERMINAL, JUMPER SPADE | 1 |
| 51 | 9.802-510.0 | CABLE, TIE, 4" BLACK | 2 |
| 52 | 9.807-348.0 | LABEL, CLEAR MYLAR | 1 |
| 53 | 9.807-345.0 | LABEL, IGNITER 120V | 1 |
| 53 | 9.807-346.0 | LABEL, IGNITER 230V | 1 |
| 53 | 9.807-347.0 | LABEL, IGNITOR 12VDC | 1 |
| 54 | 8.751-354.0 | GASKET, BURNER TUBE | 1 |

# CLEAR FLAME BURNER "M/L" REPLACEMENT PARTS

***For best performance specify genuine KNA replacement parts***

**8.920-645.0**



# CLEAR FLAME BURNER "M/L" REPLACEMENT PARTS

*For best performance specify genuine KNA replacement parts*

| Item # | Part # | Description | Qty |
|---|---|---|---|
| 1 | 8.752-865.0 | BURNER HOUSING ASSEMBLY-M/L | 1 |
| 3 | 8.700-758.0 | FUEL PUMP, SUNTEC A2VA-3106 12-24V SOL | 1 |
| 3 | 8.700-759.0 | FUEL PUMP, SUNTEC A2VA-3106 120V SOL | 1 |
| 3 | 8.700-760.0 | FUEL PUMP, SUNTEC A2VA-3106 230V SOL | 1 |
| 3 | 8.752-923.0 | FUEL PUMP, SUNTEC A2YA-7916 | 1 |
| 4 | 8.752-924.0 | SOLENOID VALVE, SUNTEC R642NL, 115V | 1 |
| 4 | 8.752-925.0 | SOLENOID VALVE, SUNTEC R753NL, 220V | 1 |
| 4 | 8.753-030.0 | SOLENOID VALVE, SUNTEC R261NL, 12/24V | 1 |
| 6 | 8.752-919.0 | AIR BAND M/L | 1 |
| 7 | 8.752-930.0 | MOTOR, 1/4 HP 115V W/CAP NIDEC | 1 |
| 7 | 8.752-931.0 | MOTOR, 1/4 HP 230V W/CAP NIDEC | 1 |
| 7 | 8.752-933.0 | MOTOR, 1/5 HP 13.5VDC AMETEK N1CPM-156 | 1 |
| 7 | 8.752-932.0 | MOTOR, 1/7 HP 115V EMERSON K41 | 1 |
| 7 | 8.753-054.0 | MOTOR, 1/7 HP 230V EMERSON K41 | 1 |
| 8 | 8.753-061.0 | COUPLING, FLEX, 1/2" x 5/16" x 3-7/8" L | 1 |
| 8 | 8.753-062.0 | COUPLING, FLEX, 5/16" x 5/16" x 3-7/8" L | 1 |
| 9 | 8.752-928.0 | FAN, 6.25 x 4.25 x .50 BORE | 1 |
| 9 | 8.752-929.0 | FAN, 6.25 x 4.25 x .313 BORE | 1 |
| 10 | 8.752-920.0 | ELBOW, 37 DEG FLARE X 1/8" NPT 90 DEG | 1 |
| 11 | 8.750-547.0 | CONNECTOR, 37 DEG FLARE X 1/8" NPT, LONG | 1 |
| 13 | 8.752-934.0 | FUEL LINE ASSEMBLY, M | 1 |
| 13 | 8.753-055.0 | FUEL LINE ASSEMBLY, L | 1 |
| 14 | 8.752-034.0 | FLANGE 1" TUBE ASSY, BURNER | 1 |
| 15 | 8.752-035.0 | FLANGE 3" TUBE ASSY, BURNER | 1 |
| 16 | 8.750-539.0 | GASKET, FLANGE | 1 |
| 18 | 8.750-526.0 | GUN, ELECTRODE / NOZZLE, 3" | 1 |
| 19 | 8.750-525.0 | GUN, ELECTRODE / NOZZLE, 1" | 1 |
| 20 | Varies | FUEL NOZZLE | 1 |
| 21 | 8.750-778.0 | ELECTRODE, IGNITION AC | 1 |
| 21 | 8.751-342.0 | ELECTRODE, IGNITION DC | 1 |
| 22 | 8.750-781.0 | CONE, AIR F22 | 1 |
| 22 | 8.752-935.0 | CONE, AIR F310 | 1 |
| 23 | 8.919-114.0 | IGNITOR, BURNER 120V | 1 |
| 23 | 8.919-115.0 | IGNITOR, BURNER 230V | 1 |
| 23 | 8.919-116.0 | IGNITOR, BURNER 12VDC | 1 |
| 24 | 8.706-745.0 | PLUG, HOLE 0.812 PLASTIC | 1 |
| 26 | 8.751-134.0 | PLUG, 1/8" NPT X HEX SHOULDER | 1 |
| 27 | 8.752-922.0 | GASKET, JUNCTION BOX ML | 1 |
| 28 | 8.920-654.0 | COVER, JUNCTION BOX ML | 1 |
| 29 | 8.750-116.0 | BLOCK, TERMINAL, 5 POLE | 1 |
| 30 | 8.750-817.0 | LIGHT, INDICATOR, GREEN 14V | 1 |

| Item # | Part # | Description | Qty |
|---|---|---|---|
| 30 | 8.750-818.0 | LIGHT, INDICATOR, GREEN 28V | 1 |
| 30 | 8.750-819.0 | LIGHT, INDICATOR, GREEN 125V | 1 |
| 30 | 8.750-820.0 | LIGHT, INDICATOR, GREEN 250V | 1 |
| 31 | 8.750-784.0 | SITE GLASS | 1 |
| 32 | 8.750-785.0 | RING, PUSH ON INTERNAL | 1 |
| 33 | 8.733-001.0 | SCREW, 8 x 1/4" HI LOW THREAD CUT | 2 |
| 34 | 8.718-762.0 | SCREW, 8-32 X 1/2", M PH RDH PL | 4 |
| 35 | 8.752-137.0 | WASHER, FUEL NOZZLE, COPPER | 1 |
| 36 | 8.718-810.0 | SCREW, 10/32 X 1/2" WHIZ LOC FLANGE | 9 |
| 37 | 8.750-770.0 | SCREW, 10/32 x 5/8", WHIZ LOC FLANGE | 3 |
| 38 | 8.750-816.0 | SCREW, 10/32 X 1/4" GROUNDING | 1 |
| 39 | 9.802-756.0 | SCREW, 5/16" x 1", WHIZ LOC FLANGE | 4 |
| 40 | 8.750-771.0 | SCREW, 1/4-20 X 1/2", PHIL FHMS | 4 |
| 41 | 9.802-750.0 | SCREW, 8-32 X 1/2 M TPG PH PNH, BLACK | 1 |
| 42 | - | LABEL, BRAND NAME | 1 |
| 43 | 9.801-268.0 | LABEL, DISCONNECT POWER SUPPLY | 1 |
| 44 | - | LABEL, SERIAL PLATE | 1 |
| 46 | 9.807-339.0 | LABEL, WIRING DIAGRAM, BURNER 115V-115V | 1 |
| 46 | 9.807-340.0 | LABEL, WIRING DIAGRAM, BURNER 230V-230V | 1 |
| 46 | 9.807-341.0 | LABEL, WIRING DIAGRAM, BURNER 230V-115V | 1 |
| 46 | 9.807-342.0 | LABEL, WIRING DIAGRAM, BURNER 115V-24V | 1 |
| 46 | 9.807-343.0 | LABEL, WIRING DIAGRAM, BURNER 230V-24V | 1 |
| 46 | 9.807-344.0 | LABEL, WIRING DIAGRAM, BURNER 12VDC | 1 |
| 48 | 9.801-273.0 | LABEL, BURNER LIGHTS | 1 |
| 49 | 8.919-105.0 | PLATE, TERMINAL BLOCK NUMBERS | 1 |
| 50 | 8.716-451.0 | TERMINAL, JUMPER SPADE | 1 |
| 51 | 9.802-510.0 | CABLE, TIE, 4" BLACK | 4 |
| 52 | 9.807-348.0 | LABEL, CLEAR MYLAR, 1.125 x 4.50 | 1 |
| 53 | 9.807-345.0 | LABEL, IGNITER 120V | 1 |
| 53 | 9.807-346.0 | LABEL, IGNITER 230V | 1 |
| 53 | 9.807-347.0 | LABEL, IGNITER 12VDC | 1 |
| 54 | 8.751-354.0 | GASKET, BURNER TUBE | 1 |
| 55 | 8.753-100.0 | PRIMARY CONTROL, HONEYWELL R7284U | 1 |
| 56 | 8.753-101.0 | CAD CELL FLAME DETECTOR, C554A | 1 |
| 57 | 8.920-656.0 | JUNCTION BOX, KNA BURNER ML | 1 |
| 58 | 8.753-036.0 | GASKET, IGNITER | 1 |
| 59 | 8.921-214.0 | BRACKET, FLAME SENSOR | 1 |
| 60 | 9.802-640.0 | COIL, OIL VALVE 120V, W/O CORDSET | 1 |
| 60 | 9.802-641.0 | COIL, OIL VALVE 230V W/O CORDSET | 1 |
| 60 | 8.700-794.0 | COIL, OIL VLAVE 12/24V W/O CORDSET | 1 |
| 61 | 9.804-072.0 | CONDUIT, WIRE COVER | 1 |

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